NASA Contractor Report 177937

THE TIMING OF NOISE-SENSITIVE ACTIVITIES IN RESIDENTIAL AREAS

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(NASA-CR-177937) THE TIMING OF NOISE-SENSITIVE ACTIVITIES IN RESIDENTIAL AREAS (Bionetics Corp.) 53 p HC A04/MF A01 CSCL 20A

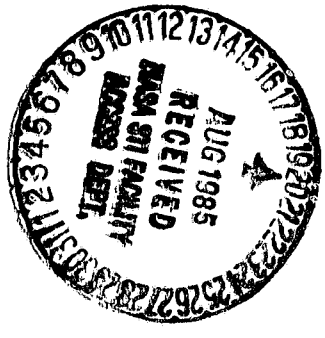
N85-31918

Unclas G3/71 21925

THE BIONETICS CORPORATION
Hampton, Virginia

Contract NAS1-16978
July 1985

National Aeronautics and Space Administration
Langley Research Center
Hampton, Virginia 23665



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INTRODUCTION

It is often assumed that the impact of similiar noise levels is different at different times of day. If there are such differences in sensitivity then it is necessary to identify the particular hours at which there is a heightened sensitivity.

There is evidence suggesting that it is not possible to measure the differences in sensitivity between reactions during the day, evening and night (Fields, 1985). The difficulty arises from the high correlations between day, evening and night noise levels. Correlations would be even higher for adjacent hours of the day and thus it would clearly not be possible to measure differences in sensitivity between reactions in particular hours. In short, direct analyses of people's responses to noise will not aid in determining the boundaries of noise-sensitive time periods.

One possible basis for establishing the boundaries of noise-sensitive time periods is the prevalence of noise-sensitive activities during different time periods. This requires information about the proportion of the total population and of various subgroups which are engaged in noise-sensitive actitivies at different times of day.

Several noise studies have published some information about the timing of sleeping periods in selected areas in France (Aubree, et al., 1971, p.429; Francois, 1977; p.17), England (Brooker and Nurse, 1983, Figure 2) and around Heathrow (Second Survey of..., 1971; p. 43).

Other large-scale, non-noise surveys of people's daily activities have collected much more extensive information about the timing of different types of activities for national populations. Previous analyses of these surveys have provided information about the amount of time that people are engaged in

different activities (Juster and Stafford, 1985). Such analyses have not however provided detailed information about the timing of activities.

This report analyses the data from the 1976 Time Use Survey conducted by the Institute of Social Research at the University of Michigan. These analyses provide information about the timing of noise-sensitive activites of the adult population of the United States. Detailed hourly data provide estimates of the proportions of the adult population which are engaged in noise-sensitive activities. On the bases of these data some broad observations are made about two issues: the prevalence of noise-sensitive activities and the timing of (time-period boundaries for) noise-sensitive activities. Some general trends in the data are identified, but no attempt is made to develop parsimoneous models to describe the ways in which patterns of time-use vary with the time of day.

The study methods used in the time-use survey are described in the next section of this report. The section after that provides the basic information on the percentages of the population which are engaged in noise-sensitive activities during each hour of the day. Results are presented separately for weekday and weekend days. The possibility of seasonal differences is considered. In the final section of the report, patterns of noise-sensitive activities are compared for population groups which are defined by age, sex, section of the country and degree of urbanization.

DATA FOR THE ANALYSES

The data for these analyses come from a large scale, longitudinal time-use survey conducted by the University of Michigan's Institute for Social Research. A representative sample of adults in the United States was interviewed about their activity patterns at four times during 1975-76. All survey procedures

have been described in detail in previous publications (Juster, et al., 1978: Juster and Stafford, 1985).

The time-use survey probability sample was designed to represent the adult population of the coterminous United States exclusive of those on military reservations. The 74 sample points are located in 37 states and the District of Columbia. The sample was stratified by geographical area. A total of 1519 people were interviewed in the first wave. By the fourth wave 947 people were interviewed. Of the total sample, 975 people were identified for whom there were interviews on at least one weekday, one Saturday and one Sunday. Approximately 970 of these respondents provide the data for the analyses in this report. The data from these respondents have been weighted to provide results which are representative of the population of the United States. Weights were applied to account for attrition from the first to fourth wave, the number of eligible people in the household, and discrepancies between characteristics of respondents and characteristics of the population provided by Bureau of the Census data.

The initial interview was conducted in person in October and November (mostly November) of 1975. Follow-up interviews were conducted by telephone in three waves: February-March 1976 (mostly in March), May-June 1976 (mostly in May) and September 1976. Other data, not analyzed in this report, were collected about activities of spouses and children. A second follow-up study was conducted with an additional four waves of data in 1981, but is not included in this report. The bases for these and other decisions about data selection are provided in appendix A.

The information about activities and the timing of the activities was gathered using a time diary technique in which the respondent provides a

detailed description of activities during the 24-hours of the previous day. Each respondent was asked:

> "...we would like to know about the things you did on... (DIARY DAY) At one minute after midnight, the beginning of... (DIARY DAY)...what were you doing?"

The interviewer then recorded a description of the activity and the time at which each activity began and ended (to the nearest minute) as well as recording answers to the following questions:

> "Where were you? [HOME, TRANSIT, WORK, OTHER]
> "Who was with you?
> "Were you doing anything else at the same time (like talking, reading, watching TV, listening to the radio, eating, or caring for children)?"

Space was provided in the standard interview for the recording of 65 activity episodes in the time-diary. (A sample page is reproduced in appendix B). The activities were coded into several hundred categories. Forty of these activity categories were identified and combined with the information about being at home in order to determine whether people at home were engaged in either of two noise-sensitive activities, sleeping or aural communication. The exact code categories are presented in appendix B and briefly described in the text.

An effort was made to obtain interviews on weekdays as well as on Saturday and Sunday. The interviews in the first and last waves tended to produce time-diary data for weekdays. As a result there is a correlation between the season of the year. This correlation is discussed later.

The individual interview data were analyzed to provide the aggregated data records which were directly manipulated in the analyses presented in this report. The unit of analysis in these analyses is thus the measure of the proportion of a particular population group which was engaged in a noise-sensitive activity during a particular hour. A separate data set which has individual respondents as the unit of analysis was produced but has not been directly analyzed for this report. Since the present analyses are based on complex, weighted aggregated data, no attempt has been made to calculate such inferential statistics as standard errors or 95 % confidence intervals.

DESCRIPTION OF NOISE-SENSITIVE ACTIVITY PATTERNS

The extent to which people are at home and the prevalence of noise-sensitive activities have been calculated for each hour of the day on the basis of people's reports on the time when they were engaged in activites on the previous day. The results of these calculations can be found in appendix C and in the figures. Figure 1 reports the activity patterns averaged over weekdays (Monday through Friday).

The "percentage of time" which is recorded for each hour in figure 1 is the percentage of the total minutes in the hour during which respondents reported engaging in the particular types of activities. This percentage is a good indicator of the average number of people who are engaged in an activity at any particular moment in the hour. This is the measure of activity level which will be used in most of this report. An alternative measure of the total number of people engaged in an activity during an hour is briefly discussed later in this section.

The percentage of time at home ranges in figure 1 from roughly 95% in the middle of the sleeping period to 35% during the day. The continuing trend

toward higher employment rates for women may have partially decreased the percentage at home during the day from these rates which come from a 1975 survey. Nonetheless it is clear that these residential areas are not empty during the normal working day.

In the afternoon there is a steady increase in the proportion of adults at home beginning at about 1500 or 1600, well before adults would return from work. This may indicate that adults are returning home to meet school children. The steady rise in the evening is interrupted after the 1700 to 1800 evening meal for the two hours when many evening activites occur outside the home. In figure 1 it can be seen that virtually all people who are at home are sleeping at 0300 and that less than 5% of the time is spent sleeping in the middle of the day. (Codes for daytime naps are also included in the sleeping periods in appendix B.) The transition periods between these nighttime and daytime extremes are long enough to be important. The low daytime level is not achieved until about 0900 and the rates for sleeping begin to increase in the evening as early as 2100. The standard nighttime period for time-period weighted noise indices such as Day-Night Sound Level (LDN) begin at 2200 when approximately a quarter of the population have already begun to sleep and end at 0700 when a quarter of the population (probably a different quarter) are still sleeping. While the exact percentages of the population which are protected by a 2200 to 0700 period can not be calculated directly, it does appear that roughly half of the population has at least some of their sleep period which is outside of the 2200 to 0700 period.

The reports of aural communication in figure 1 include interactions with children, socializing with people at home, any conversations, meals when another person is present and listening to TV, radio or other audio equipment. Such communication often was recorded as a secondary activity (see sub-item 6 for the interview question in appendix B). The growth in aural communication during the afternoon parallels that for numbers of people at home. In both cases the increase begins at 1600. Such communication peaks in the prime television viewing hours before dropping as people go to bed.

In figure 2 the two noise-sensitive activities have been summed to provide a curve which shows the combined percentage of time being spent in noise-sensitive activities. This combined presentation more clearly shows the quite steady rate of increase in noise-sensitive activities over the 1600 to 2300 time period. The daytime low of about 15% extends from only about 0900 to 1600.

An Alternative Measure of Activity Level

In other parts of this report activity levels are measured as the percentage of time during which people are engaged in noise-sensitive activities for each hour of the day. For a short-duration noise, such as aircraft noise, this also provides a good indicator of the percentage of the population which might be engaged in a noise-sensitive activity during a single noise event. For more continuous noises, such as road traffic, an alternative measure might also be considered, a measure of the percentage of the people who were ever engaged in the noise sensitive activity during at least a part of an hour. This measure is compared with the percentage-of-time measure in figure 3.

The new, ever-engaged-in-activity measure in figure 3 necessarily provides higher estimates of the number of people exposed than does the time-exposed measure. The two measures could only provide exactly equal estimates for an hour if all people engaged in the activity for the entire hour. The gap between the measures is correspondingly slight for sleep, especially in the middle of the night, but the gap is much larger for the aural communication activity. These alternative measures of the numbers of people engaged in noise-sensitive activities thus yield different estimates of the magnitude of noise-sensitive activities. The two measures do not differ, however, in respect to the timing of the noise-sensitive activities. Thus the conclusions which might be drawn about the boundaries between the highly and less highly noise-sensitive periods would be similar for the two measures.

The remainder of the discussion in the text will refer to only the percentage-of-time measure. Appendix C, however, includes a complete set of tables for both measures. Estimates of the percentage of the population which would be engaged in noise sensitive activities for at least a short time during any particular hour can thus be obtained from appendix C.

The size of the gap in figure 3 between the numbers of people at home and the numbers of people who ever engage in any aural communication during an hour at home implies that roughly half of the people at home have no aural communication at all in each hour during the daytime. It could be that people under-report the amount of aural communication they are engaged in. This might be especially likely if they had short communications or if they fail to continue to report the presence of background music. The gap does suggest that the absolute magnitudes of aural communication activities should be interpreted cautiously especially for the measures of the percentages of people ever engaged

in an activity during an hour. It is assumed that any such underreporting would not, however, distort the conclusions which might be drawn about the boundaries for time periods based on analyses of the time engaged in different activities.

Patterns for Different Days of the Week and Seasons of the Year

Noise-sensitive activity patterns for the two combined weekend days are presented in figure 4. General differences between weekday and weekend days can be observed from a comparison with figure 1. However, a better understanding of activities on different days of the week is obtained by comparisons of four different sets of days (Friday, Saturday, Sunday and Monday through Thursday) in figures 5, 6, and 7. The comparison reveals both similarities and differences in the timing of activities and the incidence of noise-sensitive activities on different days.

With respect to the timing of activities, figure 7 shows that the sleep period is extended by approximately one hour on the two weekend mornings. Other more moderate differences in sleep patterns show that the similarities are between Friday and Saturday or between Sunday and Monday through Thursday. Only the sleep activity displays such differences in the boundaries for noise-sensitive activities on different days of the week. Thus for the purposes of setting boundaries between noise-sensitive periods of the day, the weekend might best be defined as the period from early on Friday evening to early on Sunday evening. The boundaries between noise-sensitive periods could remain the same for weekdays and weekends except that the sleep-sensitive period should be extended by about one hour on Saturday and Sunday mornings.

With respect to the prevalence of other noise-sensitive activities there are substantially more people at home and more aural communication activities on weekends. The number of people at home increases by nearly half. This brings the numbers of people at home or engaged in communication activities during the day on weekends up to the numbers which are observed on weekdays at about 1700, but not up the weekday numbers for later in the evening. In the middle of the day on Saturday or Sunday the percentage at home is still less than 60%. The fact that fewer people work on weekends seems to be at least partially offset by the prevalence of other activities away from the home on weekends. Friday differs from the average for the other four weekdays in that there is noticeable less time spent at home and in aural communication activities.

In this study the day of the week is related to the time of year for the interview. In table I it can be seen that most of the weekend diary days came from the February-March and May-June interviewing waves, while most of the weekday time diary days came from either the first wave (October-November 1975) or the last wave (September 1976). The percentages have been calculated in two different directions in table I. The percentages in the upper left corner of each cell are the percentages of the interviews in a wave which are for each diary day (eg. 61% of the November interviews were for Monday-Thursday). The percentages in the bottom right corner are the percentages for a diary day which come from each wave (eg. 44% of the Monday-Thursday dairies come from the November interviews).

Interviews were thus conducted in three seasons of the year, but not in the summer months when activity patterns might be affected by summer vacations or by children being home from school. The time at home and activity patterns for the four interviewing waves are compared in figures 8, 9 and 10. In general

differences between the interviewing waves are small (less than those for the day of week) and difficult to interpret because of the correlation in the study design between day of week and season of interview. The sleep patterns for the different seasons are virtually identical in figure 10. There is a weak tendency for the November wave to be home more in the evening, however, this pattern may be at least partly inflated by the fact that the November wave had a small proportion of Friday and Saturday interviews (20%). The other waves resembled one another in that from 41 to 48% of the diaries were for Friday or Saturday. This at least suggests that the slightly reduced time at home in May could indicate that there is generally less time at home in warmer months in the evening. The policy implications for noise control are not, however, clear. People may be engaged in less aural communication at home in the evenings in warm months, however, the remaining aural communication may take place under conditions which are more sensitive to the presence of noise, i.e., out-of-doors or with the windows open.

COMPARISONS OF PATTERNS FOR DIFFERENT POPULATION GROUPS

Weekday activity patterns are presented in figures 11 through 22 for sectors of the population which are defined by sex, age, urbanization, and region of country. Tables in appendix C provide the supporting data as well as the same breakdowns for weekend patterns and for the measure of the percentage of people ever engaged in the activity during each hour.

In figures 11 and 12 it is seen that women are home more and engaged in aural communication much more than men during the day and slightly more than men during the evening. Sleep patterns are virtually the same. Presumably these differences between men and women may have been reduced some since 1975-76 with the increased employment of women outside of the home.

In figures 14 and 15 there is evidence that people over 65 are home much more and engaged in much more aural communication. They are also more likely to take naps during the middle of the day (figure 14). A rather high proportion attempt to nap at some time during the middle of the day. Table C-9 shows that in the four early afternoon hours (1200 - 1599 on weekdays) the percentages of those over 65 attempting to nap during each hour are 12%, 18%, 15% and 12%.

Activity patterns are compared for three degrees of urbanization in figures 17 to 19. Activity patterns do not appear to systematically differ in the figures. There is no support for belief that people in urban areas are at home less or have later sleeping periods. The lack of any patterns could be partially due to the choice of Standard Metropolitan Statistical Areas to define urbanization; a choice which results in considerable overlap in the types of communities which are included in the different urbanization categories (see appendix B).

Activity patterns are presented separately for each region in figures 20 to 22. There appears to be a weak tendency for people to be at home and engaged in aural communication more in the South. There is somewhat less than a one hour difference in the timing of sleep between the two most extreme regions (South is earliest, North-east is latest).

CONCLUDING REMARKS

Data from a 1975-76 nationally representative sample survey have been analyzed to provide estimates of the percentage of the population which is engaged in noise-sensitive activities during each hour of the day on weekdays, Fridays, Saturdays and Sundays. Estimates are provided of the percentage engaged in aural communication activities at home, sleeping at home, or simply

at home. The day can be roughly divided into four noise sensitivity periods consisting of two relatively steady state periods, night (2400 to 0500) and day (0900 to 1600), and the early morning and evening transition periods. Weekends differ from weekdays in that the morning transition period is one hour later and the numbers of people engaged in aural communication during the day at home is approximately one-half to three-quarters greater.

The percentage of the population engaged in either of the two noise-sensitive activities on weekdays varies from a nighttime high of 95% to a daytime low of about 15%. The low daytime activity level extends from approximately 0900 to 1600. The percentage of the population engaged in aural communication activities increases from 1600 and the percentage sleeping increases from 2000. Even during the daytime on weekdays there is a substantial proportion of the population which is at home (over 35%).

The extent and timing of noise-sensitive activities was found to be similiar for all parts of the United States, for different sizes of urban areas, and for the three seasons surveyed (September through May). Women and people over 65 are much more likely to be home during the daytime on weekdays. The timing of activity periods does not differ greatly by sex or age. There was less than a one hour difference for even the strongest pattern (people under 25 years of age go to bed earlier and arise later than people over 65).

ACKNOWLEDGEMENT

The data for the time-use survey were originally collected by the Institute for Social Research at the University of Michigan. The data collection was supported by the National Science Foundation (grant numbers SOC74-20206, SOC74-20206A01, SOC74-20206A03, and RDA75-21077) and by the U.S. Department of Health Education and Welfare (grant number RDA75-21077). Recoding of the data for the analyses in this report was carried out at the Institute for Social Research.

APPENDIX A: OPTIONS SELECTED FOR PROCESSING TIME-USE DATA

Five major decisions relating to the processing of the data in the time-use data file are described in this appendix. The decisions relate to the (1)study year (2) inclusion of secondary respondents from households (3) weighting of the sample (4) division by day of week (5) division by season of year. The day-of-week and season-of-year issues are discussed because these two variables are correlated with each other and with sample attrition. About 3/4 of the Monday through Friday interviews were conducted in September or May while about 3/4 of the Saturday and Sunday interviews were conducted in the two remaining waves. The characteristics of the sample, if no weights were used, would be expected to change from the first interview to the last interview due to higher attrition rates for the more mobile sectors of the population. For this particular survey design this means that attrition is related to season of survey and day of week.

1. Year of survey

Time use data are available for both the first phase (4 waves in 1975-76) and the second phase (4 waves in 1981-82). The first (1975-76) phase sample was selected to represent the population of the United States and is thus more useful for this report. The 1981-82 sample is largely a subset of the earlier sample which could provide information about any changes in the intervening years. The 1975-76 sample also has the advantage of being larger.

2. Secondary respondents

The 1975-76 sample of a single selected individual from each household is supplemented with interviews with spouses (wife if the original respondent is male or husband if the respondent is female). Including these spouses in the analyses would generally lead to greater precision because of the larger sample size for the analyses of sleep and time at home. However, analyses concerning aural communication could not utilize secondary respondents. The spouse data were not suitable for the aural communication analyses because information about secondary activities was not collected for the spouses. This creates no problem for sleep since sleep is a primary activity, but since aural communication is often combined with another activity (eg. listening to the television and sewing) estimates of aural communication using spouses would have underestimated the amount of aural communication activities. The spouses were excluded from the other analyses partly because this lead to economies in data analysis planning and partly because the use of only primary respondents for all activities simplifies the comparisons between activities. The data from the spouses are available for future sleep or time-at-home analyses if they are needed.

3. Weighting of sample

Unless otherwise noted, the results presented in this report have been corrected with two types of sample weights. A "Census weight" is applied to account for discrepancies between the 1975 Wave 1 sample characteristics and the 1975 Census parameters for age, sex, education and urbanicity. A "Panel Loss weight" is applied to the sample to account for the attrition from the

1519 respondents of the Wave 1 sample to the final number of approximately 975 panel respondents who had interviews on three or four waves. The weights were used inorder to provide the best estimates of population parameters even though this somewhat increases the variance of study estimates. A visual comparison of the weighted and unweighted results for weekdays and weekends did not identify any important discrepancies.

4. Day of Week

Time use patterns are always reported separately for weekdays and weekends. The weekday and weekend data were not combined since, as the analyses in the report show, there are significant differences between weekdays and weekends in the morning sleeping period and the daytime aural communication patterns. The smaller differences between Friday and other days of the week and between Saturday and Sunday were also described in the body of the report. The "weekend" interviews are approximately equally divided between Saturday and Sunday. The "weekday" data, however, slightly over weight the effect of Friday since about one third of the weekday interviews refer to Friday.

5. Season of Year

Time use patterns are averaged over all seasons except where the seasonal differences are analyzed. The small seasonal differences did not justify separate analyses throughout the report. It should be remembered that there may be greater differences which could not be studied with this data set because no data were collected for the summer months when children are out of school. It was noted above that season and day of week are not independent in the complete sample of all survey interviews. Since the season of the

survey appears to have little effect on activity, the combining of data from different seasons would not appear to have seriously distorted the weekday and weekend results presented in this report.

APPENDIX B: SURVEY QUESTION AND CODING

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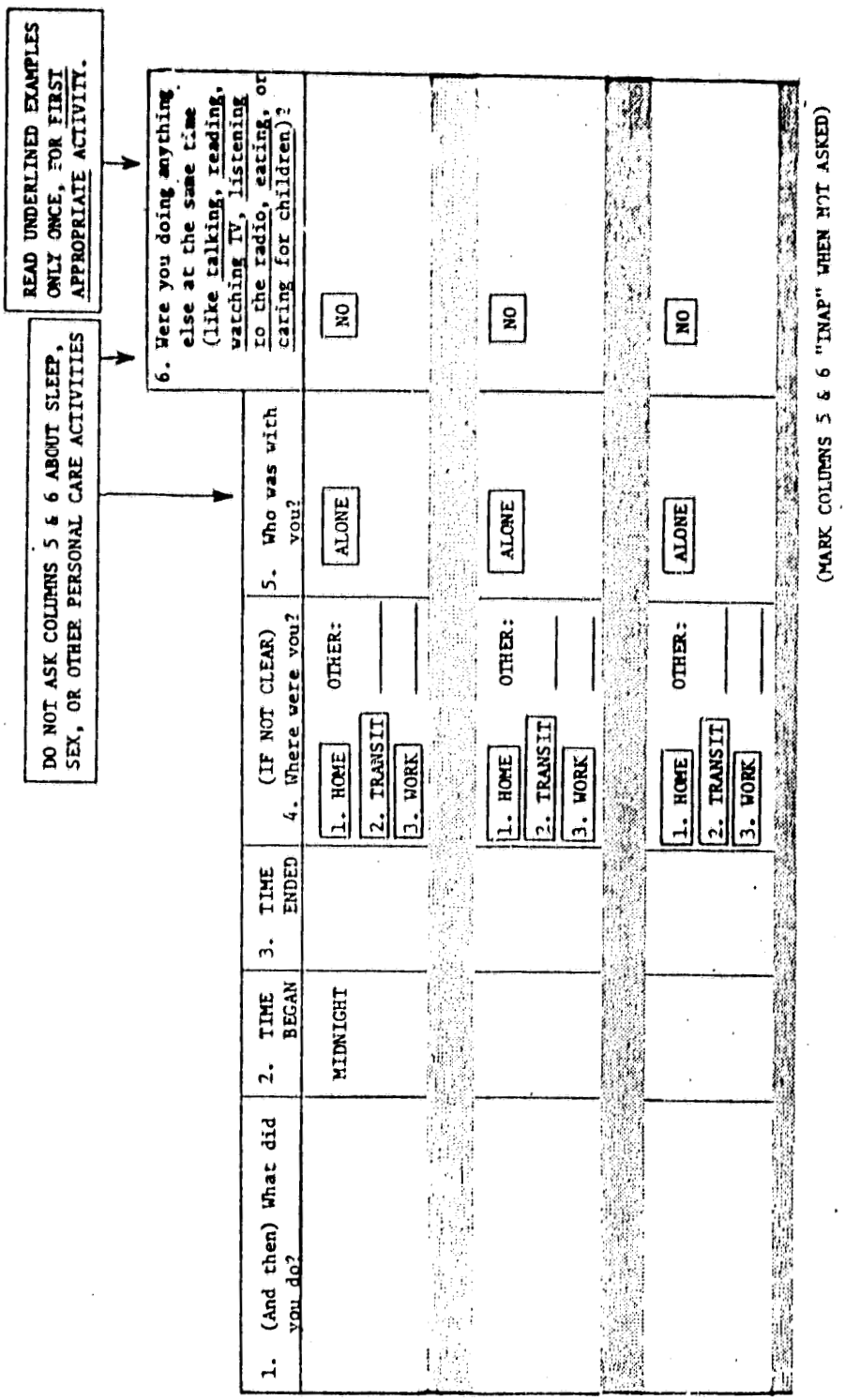
Reproduction of Time-Diary Question

(This is the first page of the time-diary section. It was followed by eight pages with spaces for a total of 51 activity episodes. This particular page comes from the May-June 1976 telephone follow-up interview.)


READ UNDERLINED EXAMPLES ONLY ONCE, FOR FIRST APPROPRIATE ACTIVITY.
DO NOT ASK COLUMNS 5 & 6 ABOUT SLEEP, SEX, OR OTHER PERSONAL CARE ACTIVITIES
1. (And then) What did you do?
2. TIME BEGAN
MIDNIGHT
3. TIME ENDED
(IF NOT CLEAR)
4. Where were you?
1. HOME
2. TRANSIT
3. WORK
OTHER:
5. Who was with you?
ALONE
6. Were you doing anything else at the same time (like talking, reading, watching TV, listening to the radio, eating, or caring for children)?
NO
(MARK COLUMNS 5 & 6 "NAP" WHEN NOT ASKED)

Codes for Defining Sleep and Aural Communication

Respondents who were at home and reported activities which were included in either of the two following codes were classified as sleeping:

459. Night sleep; longest sleep for day; (may occur during day for night shift workers) including "in bed, but not asleep

469. Naps and resting: rest periods, "dozing," "laying down" (relaxing code 981)

Respondents who were at home and reported any of the following activites were classified as engaged in aural communication:

221. Helping/teaching children learn, fix, make things; helping son bake cookies; helping daughter fix bike (homework code 222)

222. Help with homework or supervising homework

236. Giving child orders or instructions; asking them to help; telling them to behave (receiving instructions, code 976)

237. Discipling child; yelling at kids, spanking children (being disciplined--code 966); correcting children's behavior

238. Reading to child

**** NOTE: Codes 239, 249, 259 are adult only codes

239. Conversations with household children only; listening to children

249. Indoor playing; other indoor activities with children including games ("playing" unless obviously outdoor games)

259. Outdoor playing; outdoor activities with children including sports, walks, biking with, other outdoor games

752. Visiting with others; socializing with people other than R's own HH members either at R's home or another home (visiting on the phone, code 961); talking/chatting in the context of receiving a visit or paying a visit.

769. Party; reception, weddings

789. Other events; other events or socializing, don't fit above

909. Radio

919. TV

929. Records, tapes, "listening to music," listening to others playing a musical instrument

961. Phone conversations--not coded elsewhere, including all visiting by phone

962. Other talking/conversations; face-to-face conversations, not coded elsewhere (if children in HH only, code 239); visiting other than 752 or 963

963. (ADULT DEFINITION) Conversation with HH members only--adults only or children and adults; (children only, code 239)

964. Arguing or fighting with people other than HH members only, household and nonhousehold members, or NA

965. Arguing or fighting with HH members only

439. Meals at home; including coffee, drinking, smoking, food from a restaurant eaten at home, "breaking," "lunch" [Only included if someone else is coded as present in response to subquestion 5.

300-399 Obtaining goods and services [Only included if someone else is coded as present in response to subquestion 5]

Code for Urbanization

The definition of urbanization is based on types and boundaries of the Standard Metropolitan Statistical Areas as defined by the Bureau of the Census in 1974. The use of SMSA's for the definition results in outlying suburbs and small communities being grouped with large cities in some instances. The three urbanization categories are:

1. Central Cities with populations of over 100,000 in SMSA's and other places with populations of over 100,000 in SMSA's.
2. Places with populations of 50,000 to 99,999 in SMSA's.
3. All other places (mainly not SMSA's).

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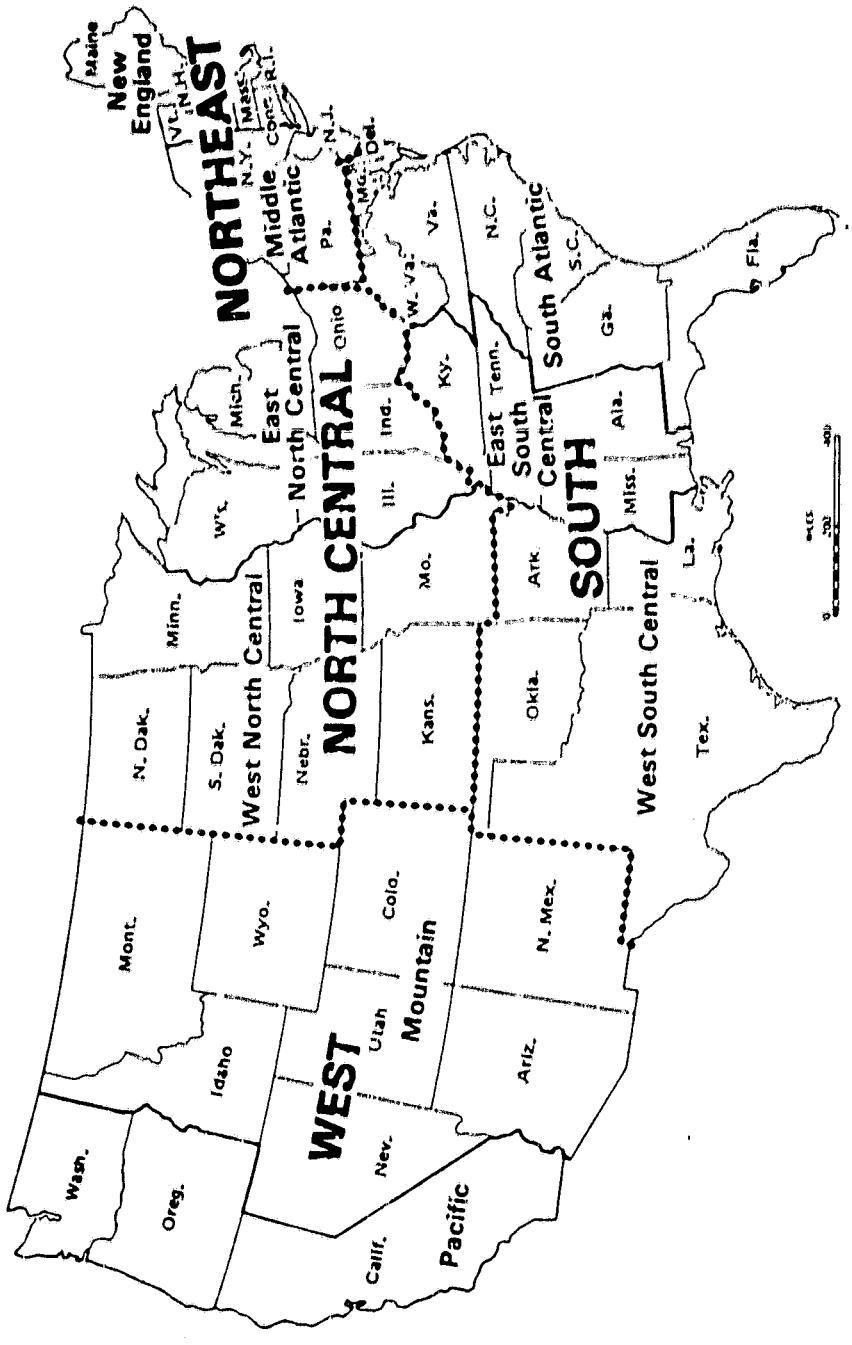
Definition of Regions

Regions of the United States



APPENDIX C:

DETAILED HOURLY ACTIVITY DATA FOR ALL INTERVIEWS AND FOR 19 SUBGROUPS FOR WEEKENDS AND WEEKDAYS

TABLE C-1. PERCENT OF TIME AT HOME BY HOUR (WEEKDAYS)

SUBGROUP	HOUR OF THE DAY																					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
MON-THRU	93.7	94.8	95.6	95.8	95.7	93.9	87.4	70.0	53.3	44.8	39.5	38.4	39.0	36.7	36.8	40.1	48.5	62.2	68.6	65.5	68.8	76.3	83.4	88.5
FRIDAY	91.2	92.8	93.6	94.4	94.6	91.6	81.5	61.8	42.3	34.2	29.1	26.5	29.0	28.7	27.4	30.1	39.9	53.0	60.8	56.4	59.4	64.9	74.5	80.8
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	94.4	95.3	96.1	96.1	95.9	94.0	86.9	68.5	49.9	41.0	36.8	36.0	36.5	34.2	34.3	38.3	47.1	62.7	69.7	64.2	67.7	76.1	84.4	90.0
MARCH	90.1	91.2	91.5	92.1	92.5	90.2	81.2	64.2	49.9	41.3	36.4	34.4	36.4	36.6	36.5	38.6	49.5	61.8	66.9	64.9	66.2	72.1	79.1	83.6
MAY	92.2	93.3	94.4	94.9	94.7	92.3	84.7	70.8	56.4	47.2	40.4	39.2	40.4	38.0	36.6	37.4	45.2	54.2	61.7	60.3	61.7	68.4	76.7	84.8
SEPTEMBER	92.9	94.4	95.5	96.2	96.1	93.8	86.9	67.9	49.9	42.6	36.3	34.1	35.5	33.8	33.3	36.5	44.7	57.4	64.2	62.2	66.4	72.2	79.3	84.0
EXTENT OF URBANIZATION																								
100,000+	94.1	94.9	95.2	95.6	95.7	94.2	87.3	69.0	53.2	43.7	38.1	34.4	32.4	32.4	32.3	36.4	46.3	62.3	68.8	67.3	68.8	75.0	82.3	86.7
OTH. SMSA	92.5	93.4	93.9	94.3	94.3	93.0	85.5	67.4	46.7	36.3	30.5	29.1	30.7	29.4	29.9	33.7	43.4	55.6	63.2	60.2	63.3	69.1	76.8	83.1
NON-SMSA	93.0	94.3	95.6	95.8	95.7	93.1	85.6	67.8	51.0	43.8	38.9	38.3	40.3	37.6	37.0	39.6	47.5	60.6	67.1	62.7	66.7	74.5	82.4	87.8
SECTION OF COUNTRY																								
WEST	93.2	93.9	94.7	95.0	95.1	93.4	86.4	67.2	50.6	41.1	33.6	31.4	32.6	31.6	31.3	36.0	45.2	59.1	65.5	63.0	67.1	75.9	83.3	88.4
N CENTRAL	91.7	93.1	94.5	94.8	94.5	92.1	83.8	67.9	51.1	42.4	37.8	35.6	37.5	34.7	33.6	36.7	47.3	59.5	64.9	58.9	61.9	69.6	78.4	84.3
N EAST	93.0	94.9	95.5	96.0	96.3	94.9	88.7	72.2	52.8	43.2	36.9	36.0	35.4	32.5	33.5	37.3	47.9	60.5	65.2	62.5	64.3	70.3	78.3	83.6
SOUTH	94.7	95.4	95.9	96.2	96.1	93.6	86.2	65.8	48.6	42.0	38.3	37.8	38.9	38.4	38.3	39.9	45.2	60.5	70.3	68.7	72.4	78.1	84.7	89.7
SEX OF RESPONDENT																								
MALE	90.3	91.6	92.7	93.1	93.1	90.0	79.4	55.4	35.6	29.3	26.2	25.5	27.1	24.1	23.2	24.7	34.3	50.5	60.2	58.2	62.0	69.9	78.2	84.3
FEMALE	95.6	96.6	97.2	97.5	97.5	96.2	91.7	79.0	63.8	53.6	46.4	44.3	44.8	44.1	44.5	49.0	57.1	68.2	72.4	67.7	70.4	76.6	83.8	88.6
AGE OF RESPONDENT																								
18-24 YR	91.4	93.9	95.2	96.5	96.4	93.7	86.1	68.0	48.1	37.5	30.3	28.8	28.2	26.4	28.4	29.9	37.7	52.3	59.7	54.8	56.0	61.8	71.4	79.6
25-44 YR	92.5	93.7	94.7	94.8	94.8	92.5	83.7	62.5	44.0	36.2	31.7	29.4	30.3	30.0	30.5	33.7	42.8	55.9	62.8	57.3	61.9	70.3	79.1	84.9
45-64 YR	94.2	95.4	96.0	96.5	96.4	94.6	87.6	67.6	48.6	40.8	35.7	34.7	37.1	33.2	31.4	35.3	46.5	62.1	70.1	68.4	70.1	76.8	83.3	88.4
65-97 YR	94.4	94.4	94.6	94.8	94.7	93.8	92.8	90.2	80.7	71.3	65.2	65.7	63.8	60.9	58.5	63.0	68.5	74.8	78.3	77.5	81.4	85.1	91.0	93.3
TOTAL SAMPLE																								
	93.1	94.3	95.1	95.5	95.4	93.3	85.9	67.9	50.6	42.2	36.9	35.5	36.5	34.7	34.5	37.6	46.4	59.9	66.6	63.2	66.5	73.5	81.2	86.6

ORIGINAL PAGE IS
OF POOR QUALITY

TABLE C-2. % OF TIME IN AURAL COMMUNICATION BY HOUR (WEEKDAYS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
MON-THRU	5.4	2.1	.9	.4	.6	1.4	7.0	12.1	10.9	10.4	11.0	12.4	15.6	12.8	12.6	14.2	17.9	26.4	35.3	39.8	45.4	45.2	32.1	13.5
FRIDAY	3.8	1.6	.2	0	.7	2.8	7.2	11.0	7.9	8.0	6.8	7.7	10.9	10.2	9.6	9.6	13.6	24.5	31.7	34.4	39.7	40.1	31.5	15.1
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	6.3	2.8	1.0	.3	.4	1.8	6.9	11.5	9.9	9.8	9.9	11.4	14.6	10.9	11.3	12.9	17.1	26.8	36.3	39.3	44.6	44.8	33.7	15.2
MARCH	3.4	1.5	.7	.3	1.2	1.8	8.1	11.2	9.5	7.7	8.5	10.4	12.6	14.0	13.9	14.3	20.4	28.1	37.5	42.5	45.3	42.5	26.3	9.8
MAY	3.6	1.1	1.0	.9	1.1	2.3	5.7	12.0	8.8	10.8	10.3	11.7	14.5	14.1	10.8	10.5	15.0	22.0	27.7	31.2	36.3	37.1	26.1	12.8
SEPTEMBER	4.4	1.5	.3	.2	.5	1.6	7.2	12.4	11.0	10.3	10.5	11.2	14.8	12.4	12.1	13.4	15.8	25.1	32.9	37.9	44.8	45.3	33.5	14.2
EXTENT OF URBANIZATION																								
100,000+	7.5	3.0	1.1	.5	.5	1.8	7.0	12.0	11.3	12.1	11.2	11.1	13.1	11.1	12.8	14.7	18.6	30.3	38.2	40.8	46.1	45.4	34.4	16.0
OTH. SMSA	5.1	1.7	.6	.5	.6	1.5	6.7	11.4	9.8	8.5	8.1	8.9	12.2	10.5	11.1	13.3	15.7	23.9	32.9	34.2	41.3	43.5	34.1	16.7
NON-SMSA	4.0	1.7	.6	.2	.6	1.8	7.2	11.9	9.9	9.4	10.2	12.2	15.8	13.2	11.8	12.3	16.6	25.0	33.5	39.1	44.1	43.5	30.2	12.1
SECTION OF COUNTRY																								
WEST	3.9	1.5	.6	.1	.6	1.3	7.4	10.6	10.8	10.0	8.9	9.4	13.1	10.4	10.6	13.2	16.2	25.4	34.5	39.9	45.0	46.8	31.3	10.7
N CENTRAL	5.5	2.1	.9	.2	.4	1.5	5.7	11.8	10.6	10.3	10.0	11.1	14.5	12.9	11.0	13.3	16.5	25.4	32.4	33.9	38.9	41.5	29.6	14.1
N EAST	8.0	3.5	.4	.5	.5	1.7	6.0	10.8	9.8	8.9	9.0	10.7	13.3	10.3	11.4	13.4	17.2	26.6	34.4	38.0	44.3	45.8	39.6	19.6
SOUTH	3.3	1.3	.8	.6	.9	2.4	9.1	13.4	9.5	9.7	11.2	13.0	16.0	13.7	14.0	12.4	17.5	26.5	36.6	42.8	48.7	43.4	30.3	12.5
SEX OF RESPONDENT																								
MALE	3.9	1.6	.8	.3	.3	1.2	6.3	9.4	6.7	5.8	5.7	7.1	10.4	7.2	6.6	7.3	12.8	22.9	32.6	38.0	42.4	43.2	32.5	13.6
FEMALE	5.9	2.4	.6	.3	.8	2.2	7.8	14.0	13.2	13.3	13.8	14.9	18.0	16.5	16.5	18.1	20.4	28.6	36.0	38.9	45.4	44.6	31.4	14.2
AGE OF RESPONDENT																								
18-24 YR	7.9	4.0	1.2	.9	1.2	2.0	4.1	8.0	9.4	10.4	11.0	13.8	13.6	13.5	12.2	12.4	17.5	28.1	32.6	38.1	42.7	43.2	35.4	21.1
25-44 YR	5.6	2.2	.8	.1	.5	1.5	7.4	12.0	8.7	7.7	8.8	8.7	11.5	10.7	10.5	12.4	16.0	23.6	31.6	34.7	40.2	40.6	31.6	14.5
45-64 YR	4.0	1.8	.6	.4	.5	2.4	9.2	12.4	10.9	10.2	9.0	10.9	15.6	11.6	10.6	12.6	17.1	27.7	35.7	38.1	45.4	48.2	33.8	13.0
65-97 YR	3.2	.5	.4	.4	.6	1.6	7.5	19.0	17.3	17.1	16.8	20.9	25.7	18.8	20.6	20.0	23.3	33.5	47.2	52.8	52.5	44.9	29.1	8.8
TOTAL SAMPLE																								
	5.0	2.0	.7	.3	.6	1.7	7.1	11.8	10.2	9.8	10.0	11.2	14.4	12.1	11.9	13.0	16.8	25.9	34.4	38.4	44.0	43.9	32.0	13.9

ORIGINAL PAGE IS
OF POOR QUALITY

TABLE C-3. PERCENT OF TIME SLEEPING BY HOUR (WEEKDAYS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
MON-THRU	85.3	90.5	93.4	94.4	93.2	85.0	57.5	27.1	13.1	7.6	5.1	3.5	3.9	5.8	6.0	5.3	3.9	3.1	2.8	3.5	5.9	14.9	37.5	66.7
FRIDAY	84.7	89.2	92.1	93.4	91.4	78.7	49.7	22.1	10.6	5.9	3.5	2.6	2.8	3.5	2.7	3.2	2.9	2.2	2.2	2.3	3.9	11.3	30.2	58.6
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	84.8	90.3	93.6	94.6	93.6	83.9	55.3	25.9	11.8	6.6	4.8	3.0	3.4	5.4	5.1	4.8	3.2	3.0	2.6	3.5	6.5	16.1	36.6	66.1
MARCH	84.0	88.2	90.0	91.2	89.3	80.3	53.6	24.7	11.5	7.0	3.9	3.7	3.4	4.7	4.3	2.9	2.3	2.2	2.6	2.1	4.8	13.6	39.1	66.9
MAY	86.1	90.4	92.3	93.1	91.7	82.0	55.3	26.0	13.4	9.4	6.6	3.4	5.0	7.6	8.7	6.7	2.8	2.3	2.0	3.4	5.0	12.3	36.0	63.7
SEPTEMBER	85.7	90.6	93.7	95.0	93.2	84.4	56.6	26.2	13.5	7.4	4.3	3.4	3.7	4.7	4.6	4.9	4.9	3.0	2.8	3.2	4.4	12.1	33.3	62.4
EXTENT OF URBANIZATION																								
100,000+	83.3	90.2	92.9	94.3	93.3	83.8	56.6	27.5	15.3	8.3	5.2	3.7	3.7	5.4	4.4	5.0	5.1	3.8	3.3	3.8	5.9	13.1	35.2	61.8
OTH. SMSA	84.2	89.0	92.2	93.2	92.1	83.8	56.6	26.7	12.2	6.7	3.5	2.1	2.7	3.5	3.8	3.3	3.7	2.9	2.7	3.3	4.7	9.5	27.6	56.4
NON-SMSA	86.3	90.6	93.4	94.5	92.8	83.2	54.7	24.8	11.5	7.0	4.9	3.5	4.0	5.9	6.0	5.2	3.1	2.5	2.3	3.0	5.5	16.0	39.0	68.9
SECTION OF COUNTRY																								
WEST	85.8	90.6	92.4	94.0	93.3	85.1	57.7	25.6	10.4	5.0	3.8	3.3	3.6	4.3	4.7	4.0	3.5	2.3	1.9	1.8	4.6	14.5	38.5	68.6
N CENTRAL	82.3	88.1	91.9	93.4	91.5	82.0	57.2	27.8	13.5	8.2	4.6	3.0	3.3	5.0	5.2	4.7	3.8	2.8	3.0	3.6	5.3	11.7	32.8	62.1
N EAST	82.1	89.0	93.9	95.3	95.2	87.2	63.0	31.4	16.5	9.2	5.2	3.1	2.8	5.0	3.8	3.4	3.5	3.2	3.0	2.9	4.5	9.5	26.9	54.6
SOUTH	89.9	92.9	94.3	94.4	92.1	81.6	47.3	20.3	10.4	6.4	5.0	3.7	4.6	6.4	6.4	6.3	3.7	3.1	2.4	4.0	6.6	18.9	42.6	71.0
SEX OF RESPONDENT																								
MALE	83.9	88.4	90.8	91.9	90.7	79.8	51.0	23.4	13.0	8.0	6.1	4.8	5.0	5.7	5.4	4.8	3.5	3.3	2.8	3.5	6.3	14.1	34.7	63.8
FEMALE	86.3	91.8	95.1	96.2	94.6	86.7	59.6	28.0	12.1	6.5	3.4	1.9	2.4	4.9	5.0	4.8	3.8	2.4	2.4	3.0	4.6	13.9	36.6	65.4
AGE OF RESPONDENT																								
18-24 YR	79.2	85.5	91.6	94.4	93.7	86.0	67.0	39.7	21.5	13.5	6.2	3.1	2.6	2.5	3.6	3.6	3.8	3.4	2.3	1.6	2.0	7.3	24.0	51.1
25-44 YR	83.8	89.8	92.6	93.9	92.6	83.7	51.2	21.1	11.6	7.0	4.6	3.3	2.9	4.0	4.1	3.6	2.8	2.8	2.9	2.9	4.4	12.2	31.8	61.2
45-64 YR	87.6	91.4	94.2	94.9	93.2	81.7	52.0	24.0	10.7	5.8	4.0	2.8	3.0	3.9	4.5	3.8	3.7	2.3	2.3	3.9	6.7	13.6	37.6	67.8
65-97 YR	88.6	92.1	93.2	93.7	92.9	87.7	67.3	30.5	11.5	5.0	4.5	4.3	8.2	13.7	10.1	9.6	5.6	3.5	2.1	3.3	7.2	23.3	52.2	80.3
TOTAL SAMPLE																								
	85.2	90.2	93.0	94.2	92.7	83.5	55.5	25.8	12.5	7.2	4.7	3.3	3.7	5.3	5.2	4.8	3.7	2.9	2.6	3.2	5.4	14.0	35.7	64.6

TABLE C-4. PERCENT OF TIME AT HOME BY HOUR (WEEKENDS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
SATURDAY	86.4	88.6	90.4	91.7	91.8	91.0	87.8	82.6	73.6	62.7	55.3	52.7	52.0	49.4	49.1	51.4	56.7	60.3	61.4	61.1	61.4	65.4	71.1	74.8
SUNDAY	94.0	86.5	89.3	90.6	91.3	91.1	89.7	86.5	80.0	68.9	57.7	53.0	56.2	56.9	55.6	55.2	58.7	63.3	64.7	66.0	71.3	77.4	82.7	86.9
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	84.4	88.4	91.6	93.0	93.9	93.8	91.4	88.0	79.7	67.5	60.6	55.1	56.0	55.6	55.2	58.8	63.7	67.6	69.2	69.5	73.4	78.7	85.9	90.4
MARCH	85.4	87.4	90.1	91.6	92.1	91.8	90.4	86.0	78.4	67.9	57.1	54.1	56.5	56.2	54.8	54.4	59.6	63.9	65.9	64.9	67.6	72.0	76.7	79.9
MAY	85.1	87.3	89.0	89.9	90.2	89.7	86.2	81.7	74.4	63.6	54.8	51.6	51.9	49.6	49.2	51.5	54.8	59.2	59.6	60.5	62.8	68.2	74.1	78.5
SEPTEMBER	86.0	87.8	89.9	91.7	91.2	90.4	88.2	85.4	76.4	64.5	55.1	49.8	51.4	52.5	51.6	49.4	53.7	56.8	58.1	62.2	65.8	71.4	76.5	80.9
EXTENT OF URBANIZATION																								
100,000+	83.1	86.1	89.0	91.3	91.7	91.9	88.9	84.0	76.1	66.7	58.6	56.0	55.9	53.2	54.2	55.3	58.3	61.7	62.8	64.1	67.0	72.3	76.4	79.9
OTH. SMSA	82.4	85.7	88.3	90.0	90.7	90.6	88.4	84.4	77.1	64.4	56.1	50.7	52.4	54.0	51.9	50.2	55.8	60.2	59.9	61.3	62.6	67.1	73.5	79.7
NON-SMSA	87.1	88.8	90.8	91.5	91.7	91.0	88.8	84.8	77.0	66.0	55.8	52.4	54.1	52.9	51.8	53.7	58.2	62.5	64.4	64.2	67.6	72.7	78.4	81.8
SECTION OF COUNTRY																								
WEST	83.8	86.8	90.3	91.0	91.9	91.3	88.4	83.4	74.2	63.8	55.8	52.5	51.6	50.0	48.9	49.4	55.7	60.1	63.2	63.8	66.0	73.2	78.8	81.9
N CENTRAL	83.2	86.0	88.2	89.5	89.9	89.5	87.1	83.6	75.1	63.6	55.2	50.2	52.3	52.4	52.8	54.5	58.2	63.5	64.2	64.4	67.2	71.0	75.3	80.2
N EAST	87.0	89.3	92.1	94.2	94.7	94.2	92.1	86.9	79.7	69.8	60.7	57.6	56.9	54.5	54.1	55.3	60.3	63.7	63.0	61.9	63.8	67.4	73.3	78.0
SOUTH	87.3	88.7	90.0	91.1	91.0	90.7	88.6	85.0	78.6	67.2	55.7	52.9	56.1	55.5	53.3	53.4	56.8	59.8	61.8	63.6	67.4	73.3	79.7	82.9
SEX OF RESPONDENT																								
MALE	82.9	85.4	88.1	89.4	90.0	89.5	86.3	80.5	71.3	60.5	52.4	49.2	50.8	50.8	49.5	50.5	54.4	60.0	60.5	62.1	65.4	69.8	74.8	79.1
FEMALE	87.1	89.3	91.3	92.6	92.8	92.4	90.7	87.9	81.5	70.3	59.9	55.8	56.9	55.2	54.8	55.7	60.4	63.3	65.3	64.8	67.2	72.8	78.7	82.4
AGE OF RESPONDENT																								
18-24 YR	72.2	76.3	81.0	84.4	86.1	86.4	83.4	79.6	74.4	66.8	58.6	49.8	42.9	42.3	40.0	38.6	40.8	48.2	51.8	53.3	51.3	53.9	60.5	69.2
25-44 YR	81.1	84.3	87.3	89.2	89.6	89.1	86.9	82.6	74.6	62.1	51.7	48.9	49.1	47.5	48.3	50.2	55.3	60.0	59.0	59.0	63.6	69.0	74.6	79.0
45-64 YR	91.9	93.0	93.6	93.8	93.7	93.4	90.7	85.6	76.4	64.7	55.3	52.6	57.0	56.4	55.0	56.5	61.9	63.8	67.9	67.6	69.3	75.5	81.7	84.8
65-97 YR	95.3	96.0	97.2	97.2	96.9	96.4	95.8	94.1	88.1	77.7	69.5	66.4	73.0	73.5	68.6	68.5	71.7	76.4	76.0	76.7	80.9	85.9	88.9	89.5
TOTAL SAMPLE																								
	85.2	87.5	89.9	91.1	91.5	91.1	88.7	84.6	76.8	65.8	56.5	52.8	54.1	53.2	52.4	53.3	57.7	61.8	63.1	63.6	66.4	71.4	76.9	80.9

ORIGINAL PAGE IS
OF POOR QUALITY

TABLE C-5. % OF TIME IN AURAL COMMUNICATION BY HOUR (WEEKENDS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
1 SATURDAY	6.7	4.2	1.8	.8	.5	1.3	3.5	9.2	12.5	14.5	14.4	14.7	17.6	17.5	18.6	20.6	23.9	25.9	32.3	37.5	40.9	39.9	29.8	15.7
SUNDAY	7.4	3.9	1.7	.9	.6	1.1	2.9	7.7	13.8	17.5	17.2	17.9	21.7	23.5	23.6	24.5	26.9	30.5	37.0	43.7	47.1	43.8	27.4	11.7
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	7.4	3.6	.8	.4	.6	1.2	4.2	7.3	13.1	17.8	17.3	17.7	21.6	23.3	24.7	26.8	28.9	32.3	41.0	44.4	47.3	42.3	34.0	14.4
MARCH	6.5	4.1	2.4	.9	.5	1.2	3.7	10.7	14.5	16.5	15.0	16.0	20.7	21.5	21.4	21.7	27.2	30.5	35.6	42.1	44.9	42.5	27.3	13.6
MAY	6.7	3.9	1.7	.9	.5	1.1	2.6	7.0	12.4	15.3	15.7	16.4	17.6	17.8	19.4	22.5	22.8	25.7	32.3	38.2	42.4	41.8	29.3	13.7
SEPTEMBER	9.4	4.5	.9	.6	.8	1.5	2.4	7.4	11.6	14.6	16.8	15.2	20.5	23.2	21.4	20.4	23.7	24.4	31.7	39.4	42.7	39.3	24.3	12.9
EXTENT OF URBANIZATION																								
100,000+	8.8	4.6	2.7	1.8	1.3	2.0	4.3	7.3	11.2	17.0	17.0	16.6	21.1	23.4	23.4	25.5	27.2	28.3	35.0	40.3	43.7	43.3	28.7	15.3
OTH. SMSA	9.1	5.6	2.2	.9	.4	1.1	2.1	6.5	12.8	14.8	15.0	15.0	19.4	20.9	19.4	20.6	22.7	26.9	32.9	39.8	44.3	43.8	33.2	16.3
NON-SMSA	5.6	3.2	1.3	.4	.3	.9	3.2	9.6	14.1	16.0	15.6	16.7	19.2	19.3	20.8	22.1	25.7	28.7	35.1	41.0	44.1	40.5	26.8	12.0
SECTION OF COUNTRY																								
WEST	4.7	3.1	1.7	.9	.5	1.3	3.4	9.4	13.7	17.6	17.6	19.0	20.1	19.6	19.6	20.0	23.2	29.9	35.6	44.4	46.5	44.8	25.6	9.9
N CENTRAL	9.9	5.0	2.2	1.1	.4	1.1	2.0	7.5	12.0	14.2	14.6	14.2	19.0	19.4	20.7	21.9	24.8	27.4	35.1	41.3	45.8	43.2	32.1	17.8
N EAST	6.9	4.5	1.6	.5	.6	.8	3.3	6.9	12.5	15.9	16.1	16.1	19.9	21.3	21.9	25.0	29.0	30.3	32.8	35.5	39.2	39.2	32.2	14.5
SOUTH	5.5	3.3	1.4	.6	.6	1.6	4.3	9.8	14.6	17.0	15.8	16.9	19.8	21.9	22.0	23.5	25.2	26.8	34.6	40.5	43.5	40.0	24.4	11.0
SEX OF RESPONDENT																								
MALE	6.7	3.4	1.4	.8	.3	.7	2.7	8.2	12.2	14.3	14.9	16.4	21.4	21.1	21.9	23.4	26.2	29.8	35.4	41.0	45.0	42.5	28.4	13.2
FEMALE	7.4	4.5	2.1	.8	.7	1.6	3.6	8.6	14.0	17.4	16.5	16.2	18.1	20.1	20.4	21.8	24.7	26.9	34.0	40.3	43.2	41.3	28.7	14.1
AGE OF RESPONDENT																								
18-24 YR	8.5	4.9	2.8	1.1	.2	.7	1.6	3.4	7.7	13.2	19.2	18.8	18.8	20.3	16.9	17.2	19.7	23.8	28.7	35.1	34.5	34.8	26.6	17.0
25-44 YR	8.7	4.8	2.3	1.2	1.0	1.6	3.2	8.8	13.2	16.9	15.8	16.4	19.0	19.4	20.5	21.6	24.8	27.9	32.1	37.8	41.8	41.2	30.6	15.2
45-64 YR	6.7	4.1	1.5	.6	.3	1.1	3.8	9.8	15.2	16.6	14.5	14.7	20.5	22.8	22.7	24.1	27.2	29.6	37.4	42.4	46.1	45.0	29.2	12.8
65-97 YR	1.7	.8	0	0	.2	1.0	5.0	13.1	18.8	19.1	17.7	18.6	26.4	23.9	26.1	29.8	31.7	35.6	47.6	52.6	54.5	45.1	24.4	8.1
TOTAL SAMPLE																								
	7.0	4.0	1.8	.8	.5	1.2	3.2	8.4	13.2	16.0	15.8	16.3	19.6	20.5	21.1	22.6	25.4	28.2	34.6	40.6	44.0	41.8	28.6	13.7

TABLE C-6. PERCENT OF TIME SLEEPING BY HOUR (WEEKENDS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
1 SATURDAY	76.8	82.1	87.5	90.0	90.2	86.4	74.5	52.3	27.7	14.4	7.3	4.4	3.7	6.1	6.7	6.6	6.1	5.0	3.4	3.5	5.3	11.9	29.8	51.7
SUNDAY	73.6	80.6	86.3	88.8	89.6	87.1	78.6	57.4	32.2	14.9	7.5	4.9	4.2	6.7	8.5	7.6	6.2	4.7	3.8	4.3	6.9	17.6	42.0	67.9
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	73.4	82.8	89.8	91.9	91.9	88.7	79.0	60.2	31.6	14.2	8.6	5.0	2.8	5.3	6.5	7.7	6.4	5.6	3.8	4.5	9.1	21.6	40.5	66.5
MARCH	76.3	80.8	86.6	89.9	90.8	88.1	78.2	54.2	31.6	17.1	9.0	5.6	4.2	6.4	7.8	6.8	6.0	4.6	3.4	4.3	6.9	14.8	36.6	59.1
MAY	75.6	81.4	86.2	88.0	88.3	84.7	73.4	53.4	27.8	12.2	5.2	2.9	3.5	6.0	6.5	6.1	6.1	4.8	3.4	2.9	4.1	12.2	33.3	57.8
SEPTEMBER	72.2	81.2	86.8	89.6	89.7	86.5	78.4	56.0	29.4	15.2	8.1	6.6	6.3	8.9	11.9	10.5	6.2	5.1	4.6	5.2	6.8	15.7	36.8	61.2
EXTENT OF URBANIZATION																								
100,000+	70.4	78.3	84.7	88.1	89.0	86.2	75.6	57.6	35.8	18.1	10.6	7.9	5.2	6.7	9.0	7.5	6.8	6.2	4.8	4.9	7.2	13.5	33.4	56.1
OTH. SMSA	70.2	78.5	84.7	87.6	89.4	86.8	79.1	60.5	33.1	15.7	6.9	4.1	2.8	4.6	5.8	5.9	4.8	3.4	2.1	2.4	3.3	9.5	27.5	54.0
NON-SMSA	78.9	83.6	88.6	90.6	90.4	86.9	75.9	51.7	26.5	12.9	6.4	3.5	3.9	6.9	7.8	7.4	6.4	4.9	3.7	4.1	6.8	17.3	40.1	63.6
SECTION OF COUNTRY																								
WEST	76.1	81.5	86.9	89.0	90.0	86.7	76.9	54.6	27.6	11.4	5.6	3.9	3.8	7.0	8.0	7.6	6.6	4.1	2.1	1.6	5.3	15.5	42.0	64.9
N CENTRAL	70.3	79.2	85.0	87.4	88.4	85.4	77.2	54.7	30.9	16.3	7.0	4.9	3.5	5.2	7.4	7.3	6.3	5.2	3.3	3.3	4.9	12.5	31.0	56.2
N EAST	76.4	82.0	89.3	92.9	93.2	91.0	80.8	62.0	36.8	17.6	8.0	3.7	3.7	4.6	4.7	5.1	3.7	4.0	3.7	5.1	7.5	12.7	29.3	53.6
SOUTH	79.2	83.3	87.5	89.7	89.2	85.5	72.8	50.7	26.0	13.1	8.8	5.5	4.7	8.5	9.5	7.8	7.2	5.6	4.9	5.4	7.1	18.2	41.6	64.6
SEX OF RESPONDENT																								
MALE	74.2	80.6	86.0	87.7	88.6	85.2	73.4	53.1	29.7	15.6	9.1	5.8	4.8	7.5	7.3	7.2	6.1	5.2	4.0	4.8	7.0	16.0	36.9	59.3
FEMALE	75.9	82.0	87.7	90.8	90.9	88.0	79.1	56.4	30.1	13.9	6.1	3.6	3.3	5.5	7.9	7.0	6.1	4.5	3.2	3.1	5.3	13.7	35.1	60.3
AGE OF RESPONDENT																								
18-24 YR	60.7	68.8	77.5	82.6	85.3	83.8	78.6	67.8	50.7	32.7	14.9	7.0	4.6	4.8	5.1	5.8	5.4	5.5	4.7	3.6	3.1	8.1	22.7	43.5
25-44 YR	69.1	77.2	83.7	86.5	87.4	84.8	76.4	57.0	31.5	14.0	6.2	3.5	2.4	3.8	5.4	6.0	5.7	4.5	3.1	3.2	5.1	11.2	31.0	55.6
45-64 YR	82.6	86.7	90.9	92.6	92.1	88.3	74.9	50.1	24.8	10.0	4.6	3.5	3.8	6.0	8.3	7.1	6.1	4.6	3.9	4.9	7.3	16.3	39.7	64.9
65-97 YR	91.9	94.0	96.5	96.7	96.0	92.4	78.3	47.5	18.4	9.1	9.0	7.5	8.6	15.6	14.3	11.8	8.3	5.6	3.9	5.0	9.8	27.2	54.1	78.1
TOTAL SAMPLE																								
	75.2	81.3	86.9	89.4	89.9	86.7	76.5	54.9	29.9	14.6	7.4	4.6	4.0	6.4	7.6	7.1	6.1	4.9	3.6	3.9	6.1	14.8	35.9	59.9

ORIGINAL PAGE IS
OF POOR QUALITY

TABLE C-7. PERCENT AT HOME SOME DURING HOUR (WEEKDAYS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
MON-THRU	94.1	95.2	95.8	96.0	95.9	95.1	92.0	80.4	59.5	43.2	43.2	43.7	46.0	41.2	42.0	47.8	58.0	72.7	76.7	72.2	73.1	80.7	86.5	90.9
FRIDAY	92.3	9																						
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	94.9	95.8	96.1	96.3	96.1	95.7	92.0	79.3	56.8	45.4	40.2	41.1	44.1	38.9	39.6	46.3	57.5	73.5	79.1	70.9	71.8	80.8	87.5	92.0
MARCH	90.2	91.4	91.7	92.2	92.8	91.6	87.0	74.0	56.3	46.2	41.2	38.3	42.4	39.7	41.4	46.2	57.2	71.5	73.6	70.				
MAY	92.4	94.2	94.6	95.0	95.0	94.3	89.3	79.9	61.8	52.1	44.6	44.3	46.0	43.6	41.8	42.7	53.3	64.1	70.4	67.7	66.0	72.5	80.5	88.8
SEPTEMBER	93.7	94.7	95.9	96.3	96.3	95.0	91.9	78.8	56.2	47.0	39.6	38.8	42.2	38.6	38.6	43.8	54.5	68.8	72.6	70.2	71.6	76.2	82.6	86.5
EXTENT OF URBANIZATION																								
100,000+	94.7	95.1	95.5	96.0	96.1	9.3	76.6	73.4	72.8	73.0	85.4	88.9												
OTH. SMSA	92.9	93.6	94.2	94.5	94.4	94.6	91.7	76.5	55.4	40.4	33.8	33.1	36.7	33.0	35.4	42.2	52.7	68.0	74.1	70.5	68.9	73.2	81.3	86.4
NON-SMSA	93.5	94.9	95.7	96.0	95.9	94.5	90.4	78.6	56.5	48.4	42.4	43.4	47.6	42.8	42.3	46.7	57.2	71.0	75.1	69.0	70.9	79.9	85.3	90.1
SECTION OF COUNTRY																								
WEST	93.8	94.3	94.8	95.2	95.6	94.8	91.5	78.2	57.1	46.6	36.5	36.6	41.3	37.2	36.9	42.7	54.9	69.5	73.5	69.8	71.3	79.9	86.4	90.3
N CENTRAL																								
N EAST	93.5	95.4	96.0	96.2	96.4	96.0	92.7	81.3	60.4	47.4	40.7	40.5	42.8	36.4	38.2	45.4	57.6	71.3	75.0	70.1	69.1	75.1	81.1	86.9
SOUTH	95.0	95.7	95.9	96.5	96.2	95.3	91.7	78.5	54.															
SEX OF RESPONDENT																								
MALE	90.9	92.3	93.1	93.5	93.4	92.3	86.7	69.2	41.7	33.0	28.7	29.8	33.6	27.7	27.2	30.7	44.0	62.7	69.9	64.9	66.7	74.6	82.0	87.4
FEMALE	96.0	96.8	97.3	97.6	97.6	97.1	94.9	86.8	70.6	58.9	51.1	49.5	52.0	49.7										
AGE OF RESPONDENT																								
18-24 YR	92.4	94.3	95.8	96.6	96.6	95.6	91.2	79.7	54.6	41.0	34.3	32.6	35.8	30.4	32.5	39.4	49.4	64.1	71.2	64.2	61.2	66.9	75.2	83.7
25-44 YR	93.2	94.4	94.8	95.0	95.1	94.1	89.8	74.6	50.7	40.4	34.8	33.7	36.5	34.4	36.0	42.0	52.8	68.0	72.1	65.0	66.9	75.2	82.9	87.7
45-64 YR	94.6	95.6	96.2	96.8	96.5	95.8	92.9	79.3	55.0	46.0	39.4	40.1	44.0	38.4	37.2	41.7	56.3	72.9	77.4	75.4	74.3	80.4	86.4	90.9
65-97 YR	94.4	94.4	94.8	94.8	94.8	94.3	93.4	92.4	86.2	76.2	70.3	71.9	72.6	66.2	63.1	68.9	74.2	80.7	82.8	81.8	83.			
TOTAL SAMPLE																								
	93.6	94.7	95.3	95.7	95.6	94.8	91.1	78.5	57.0	46.7	40.6	40.2	43.4	39.4	39.7	45.1	56.0	70.7	75.2	70.3	70.9	77.7	84.5	89.1

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TABLE C-8. % AURALLY COMMUNICATE SOME DURING HOUR (WEEKDAYS)

SUBGROUP	HOUR OF THE DAY																					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
MON-THRU	6.8	3.4	1.1	.6	1.0	3.3	15.7	24.4	19.2	16.3	15.6	18.6	24.1	19.1	17.6	21.6	27.8	39.7	49.7	51.3	54.3	55.6	42.9	21.1
FRIDAY	4.9	2.5	.5	.1	1.4	5.7	16.9	23.0	15.4	13.5	11.2	11.1	17.1	14.9	14.5	15.8	21.9	38.3	46.3	45.1	48.3	47.3	41.1	21.6
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	8.2	4.3	1.2	.5	.6	3.5	15.4	22.5	17.3	14.9	13.9	17.4	22.7	16.3	16.4	20.2	26.3	40.1	50.5	51.8	53.3	54.9	44.2	22.9
MARCH	4.2	1.8	.8	.3	2.0	3.3	16.3	23.7	17.7	12.6	12.4	14.3	19.2	20.3	19.7	21.8	30.5	42.7	49.3	52.4	53.1	50.9	34.2	15.1
MAY	4.5	2.2	1.2	.9	1.9	4.5	13.8	21.6	17.1	17.7	15.3	17.7	22.0	21.4	14.0	15.5	25.3	33.6	42.4	43.0	43.2	46.9	39.3	18.9
SEPTEMBER	5.4	2.7	.6	.3	1.2	4.5	17.2	26.7	19.9	17.0	15.8	16.5	23.2	18.4	17.1	20.9	25.1	38.8	48.6	48.1	54.7	54.6	44.2	22.0
EXTENT OF URBANIZATION																								
100,000+	9.0	5.0	1.3	.9	1.0	4.1	15.8	24.6	19.2	18.2	15.3	16.5	20.0	15.7	18.3	21.9	27.2	43.9	52.4	52.2	53.9	54.9	44.1	24.2
OTH. SMSA	6.9	2.8	.8	.6	1.3	3.2	16.0	23.3	19.0	14.4	12.9	12.8	19.8	15.8	16.2	21.2	25.7	38.1	49.1	49.8	50.9	55.1	46.0	25.4
NON-SMSA	5.1	2.6	.9	.2	1.1	4.1	16.1	24.1	17.6	15.1	14.8	18.3	24.2	19.8	16.6	19.1	26.2	38.1	47.4	48.9	53.1	52.3	40.5	18.5
SECTION OF COUNTRY																								
WEST	5.2	2.1	.7	.2	.7	2.2	16.7	22.5	18.9	14.9	12.6	14.6	22.7	16.3	14.7	19.8	24.2	39.4	49.7	50.1	54.2	55.1	42.5	15.4
N CENTRAL	6.9	3.5	1.4	.2	.9	4.2	12.5	23.2	18.4	16.8	15.2	17.0	22.1	19.5	16.4	20.1	28.0	40.1	46.9	45.1	47.3	52.3	41.9	22.2
N EAST	9.9	6.0	.8	.6	1.1	3.7	14.9	23.6	19.2	15.2	14.1	15.3	20.1	16.0	16.8	21.4	28.4	39.5	48.6	49.7	52.7	56.0	47.8	31.4
SOUTH	4.1	1.8	.8	.9	1.7	5.0	20.1	26.4	17.0	15.0	15.4	18.9	23.9	19.0	18.9	19.7	24.7	38.4	50.8	54.7	58.1	52.1	39.7	17.8
SEX OF RESPONDENT																								
MALE	5.1	2.7	1.2	.3	.7	3.2	15.6	20.4	12.0	8.3	8.3	10.9	15.8	10.4	9.8	11.4	20.4	35.7	45.5	47.1	50.6	52.3	43.3	21.1
FEMALE	7.3	3.6	.8	.6	1.5	4.6	16.4	27.3	23.7	22.0	20.0	21.9	28.1	24.8	23.1	28.0	31.6	42.6	51.9	52.1	54.8	54.6	41.7	21.4
AGE OF RESPONDENT																								
18-24 YR	10.0	6.6	1.6	.9	2.2	4.0	9.3	17.4	16.1	16.1	16.3	20.1	21.4	19.0	17.5	19.2	28.7	41.4	48.3	48.5	51.5	53.4	44.3	28.6
25-44 YR	6.9	3.5	1.2	.3	.9	3.7	16.7	25.5	17.1	13.2	12.9	13.7	18.4	16.4	15.9	20.2	26.1	37.6	46.3	45.4	49.5	51.9	43.0	22.6
45-64 YR	5.2	2.8	.8	.6	1.3	5.3	21.9	25.3	18.0	16.5	14.2	15.6	23.7	17.7	15.2	19.6	25.8	41.1	50.3	51.6	54.8	56.2	44.6	20.7
65-97 YR	4.8	.8	.6	.5	.7	2.4	14.7	32.6	29.6	23.8	21.6	23.3	38.3	26.6	24.8	27.5	32.4	46.3	60.9	63.0	58.0	52.4	38.7	13.2
TOTAL SAMPLE																								
	6.3	3.2	1.0	.5	1.1	3.9	16.0	24.0	18.2	15.6	14.5	16.7	22.4	18.0	16.9	20.2	26.3	39.4	48.9	49.7	52.8	53.5	42.5	21.2

ORIGINAL PAGE IS
OF POOR QUALITY

TABLE C-9. PERCENT SLEEPING SOME DURING HOUR (WEEKDAYS)

SUBGROUP	HOUR OF THE DAY																						
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
MON-THRU	87.0	92.0	94.2	94.9	94.3	89.4	67.8	34.1	15.9	9.3	6.2	4.3	5.7	7.7	8.3	7.2	5.9	4.7	4.2	4.9	7.8	19.3	46.1	74.9
FRIDAY	86.3	90.6	92.9	94.2	92.9	84.8	59.9	27.7	12.7	6.7	4.3	3.1	3.5	4.5	3.9	4.9	3.9	3.1	3.4	3.5	5.0	14.6	37.7	65.6
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	87.1	92.3	94.4	95.5	94.6	88.7	65.8	32.5	14.8	8.2	5.7	3.7	5.2	7.4	7.4	6.7	5.0	4.1	4.2	5.0	8.4	20.4	44.9	73.9
MARCH	85.3	89.1	90.7	91.4	90.9	84.8	63.7	31.9	13.2	7.8	4.6	4.2	4.5	5.8	6.5	4.6	4.3	3.2	3.6	2.9	6.1	17.5	47.0	74.2
MAY	86.7	91.4	92.9	93.5	92.8	88.2	63.7	32.0	15.3	11.1	8.2	5.1	6.5	8.8	10.6	8.5	4.1	3.9	3.7	4.8	6.6	16.3	45.0	72.0
SEPTEMBER	87.0	91.9	94.7	95.4	94.5	89.0	67.2	32.8	16.0	8.7	5.4	4.1	5.1	6.2	6.3	6.6	6.5	5.0	4.3	4.6	5.9	16.2	41.6	70.5
EXTENT OF URBANIZATION																								
100,000+	85.0	92.5	93.9	95.1	94.1	88.5	67.0	34.6	19.1	10.1	6.1	4.3	5.1	7.2	7.3	7.2	6.1	5.6	4.4	5.8	6.6	17.2	42.8	70.8
OTH. SMSA	85.9	90.2	92.8	93.5	93.1	89.0	67.2	32.6	14.9	8.1	4.0	2.4	3.8	4.2	4.7	4.8	5.7	4.0	4.3	4.3	5.9	12.4	36.1	65.3
NON-SMSA	87.9	91.9	94.3	95.0	94.2	87.9	64.9	31.6	13.6	8.2	6.2	4.5	5.7	7.8	8.1	7.1	5.0	3.9	3.8	4.2	7.7	20.7	47.4	76.0
SECTION OF COUNTRY																								
WEST	87.6	91.4	93.1	94.8	94.2	88.9	67.8	32.3	13.0	6.1	4.4	4.2	4.5	6.3	6.1	5.8	5.5	3.4	3.6	2.7	5.9	18.1	46.8	76.1
N CENTRAL	84.1	89.8	92.8	93.7	93.0	87.3	66.6	35.5	16.3	9.9	5.9	3.6	4.7	6.4	6.9	6.7	5.9	4.5	4.6	4.9	7.0	16.0	42.7	69.6
N EAST	84.0	92.3	95.2	95.5	96.0	91.4	73.7	38.6	18.9	11.5	6.2	3.1	4.5	6.6	5.1	5.0	4.3	4.3	4.3	4.1	5.8	13.7	32.8	66.3
SOUTH	91.1	93.5	94.8	95.3	93.5	86.9	58.5	25.4	12.9	7.2	6.0	5.0	6.6	8.2	9.6	8.1	5.5	4.7	3.5	5.9	8.7	23.3	50.5	77.3
SEX OF RESPONDENT																								
MALE	85.4	89.6	91.7	92.3	92.0	85.2	61.2	28.9	15.1	9.4	7.0	5.7	6.6	7.0	7.1	6.0	4.8	4.8	4.1	4.9	8.1	17.9	42.9	72.0
FEMALE	88.0	93.5	95.8	96.9	95.6	91.0	69.9	35.7	15.1	8.0	4.6	2.5	3.9	6.9	7.3	7.1	5.1	3.9	4.0	4.3	6.1	18.4	45.0	73.0
AGE OF RESPONDENT																								
18-24 YR	81.8	88.7	93.4	95.1	94.3	90.3	75.4	45.9	26.5	15.4	7.2	3.7	4.5	3.1	5.4	5.4	5.8	5.2	3.5	2.1	2.7	10.0	30.9	58.4
25-44 YR	85.4	91.4	93.4	94.6	93.8	88.7	62.7	27.5	13.4	8.3	5.4	3.8	3.8	4.9	5.3	5.0	3.9	4.3	4.5	4.0	5.8	15.9	39.7	70.1
45-64 YR	88.9	92.7	94.8	95.4	94.7	87.5	63.4	29.3	13.3	7.0	5.0	3.5	4.4	5.6	6.5	5.6	5.2	3.6	3.5	5.6	8.7	18.1	46.8	75.5
65-97 YR	90.1	92.6	93.7	93.9	93.3	89.9	74.4	40.5	14.1	6.6	6.0	6.2	12.0	18.3	14.6	12.2	8.9	4.7	3.2	5.2	8.9	29.4	61.5	86.4
TOTAL SAMPLE																								
	86.8	91.7	93.9	94.7	93.9	88.3	65.8	32.5	15.1	8.6	5.7	4.0	5.2	6.9	7.2	6.6	5.4	4.3	4.0	4.6	7.1	18.1	44.0	72.5

TABLE C-10. PERCENT AT HOME SOME DURING HOUR (WEEKENDS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
SATURDAY	87.4	89.4	91.2	91.9	92.3	91.7	90.0	86.0	78.4	67.8	61.8	58.8	59.5	54.8	54.6	57.8	63.8	67.6	68.9	66.2	65.0	68.9	73.7	77.9
SUNDAY	84.9	87.4	90.2	91.0	91.4	91.7	90.4	89.0	84.1	77.0	64.9	59.3	65.4	63.2	60.7	60.3	65.0	69.1	70.6	71.0	75.1	81.4	85.5	89.3
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	85.5	90.0	92.4	93.1	94.3	94.8	92.7	89.4	84.6	75.2	68.7	61.2	64.7	61.3	58.7	63.2	70.9	73.7	75.4	74.0	76.2	82.9	88.6	93.2
MARCH	86.2	88.4	91.1	92.1	92.4	92.1	91.4	89.3	81.6	73.9	63.2	59.4	65.3	61.4	60.3	59.8	66.2	70.5	72.6	69.3	71.0	74.8	79.2	83.0
MAY	85.8	87.9	89.5	90.0	90.5	90.4	88.4	84.5	79.2	70.9	62.0	58.4	59.6	56.0	54.7	57.8	61.4	66.0	66.1	66.5	67.0	72.4	77.0	80.8
SEPTEMBER	87.6	88.5	90.9	91.7	91.7	91.3	89.6	89.3	83.0	69.9	62.2	57.4	60.1	58.2	56.2	55.8	60.4	62.9	65.6	67.0	69.8	76.5	79.1	84.2
EXTENT OF URBANIZATION																								
100,000+	84.3	87.4	90.5	91.8	91.9	92.5	90.8	86.5	80.5	72.8	64.4	61.7	62.8	58.3	59.1	60.1	65.0	68.5	69.0	68.8	70.1	75.7	79.8	83.8
OTH. SMSA	83.6	86.7	88.9	90.2	91.1	90.9	89.7	87.2	82.2	70.8	65.8	57.0	61.3	60.8	56.9	57.1	62.6	65.2	68.6	66.9	65.2	71.2	77.3	82.6
NON-SMSA	87.8	89.5	91.4	91.7	92.1	91.8	90.1	88.0	81.2	73.0	62.0	58.8	62.8	58.7	57.4	59.4	64.8	69.5	70.4	69.2	71.9	76.5	80.5	84.0
SECTION OF COUNTRY																								
WEST	84.8	88.2	91.2	91.2	92.2	91.9	89.9	85.4	78.7	70.1	62.0	58.2	59.0	55.0	53.7	55.9	63.0	67.0	70.4	69.3	69.2	76.4	82.2	84.6
N CENTRAL	84.4	87.0	89.2	89.7	90.2	90.1	88.9	86.7	80.0	70.5	62.0	57.2	61.8	58.9	58.5	60.5	65.3	69.5	70.6	69.3	71.5	75.1	78.2	83.2
N EAST	87.8	90.3	93.0	94.5	94.9	94.9	93.2	90.6	84.7	75.6	59.1	63.7	63.9	61.2	59.0	60.6	66.5	70.7	69.5	68.0	66.7	71.5	75.6	81.6
SOUTH	87.9	89.0	90.5	91.5	91.5	91.5	89.9	87.8	82.3	74.3	62.1	58.7	64.7	60.6	58.5	59.5	63.0	66.5	68.3	67.7	71.3	76.9	82.1	84.8
SEX OF RESPONDENT																								
MALE	83.9	86.6	88.8	89.7	90.5	90.6	88.3	84.2	75.9	66.9	59.6	54.9	59.0	56.0	54.1	56.0	61.1	66.3	66.9	66.6	69.1	73.1	77.6	82.5
FEMALE	87.9	90.0	92.2	92.8	92.9	92.7	91.8	90.3	85.7	77.1	66.5	62.5	65.4	61.5	60.6	61.6	67.1	70.0	72.1	70.3	70.9	77.0	81.4	84.6
AGE OF RESPONDENT																								
18-24 YR	73.5	77.4	83.4	84.8	86.4	87.1	85.0	82.0	77.8	70.2	65.5	55.4	49.1	47.2	46.3	45.3	48.9	56.0	58.9	58.9	53.7	58.6	65.0	73.6
25-44 YR	82.5	85.5	88.5	89.6	90.1	89.9	88.5	85.1	79.2	69.0	58.6	55.7	57.6	54.5	53.9	56.6	62.1	67.1	65.7	64.5	68.3	73.3	77.2	82.1
45-64 YR	92.2	93.5	93.6	93.9	93.9	93.6	92.4	89.8	81.2	71.8	62.5	59.3	65.8	62.2	59.5	61.7	67.9	70.0	74.9	72.5	72.7	79.5	84.1	87.1
65-97 YR	95.9	96.4	97.2	97.2	97.1	96.7	96.3	96.3	93.1	86.3	76.4	71.1	82.3	76.9	73.9	73.1	78.3	80.9	87.2	79.6	83.8	87.3	90.7	90.5
TOTAL SAMPLE																								
	86.1	88.4	90.7	91.4	91.8	91.7	90.2	87.5	81.3	72.5	63.4	59.0	62.5	59.0	57.7	59.0	64.4	68.4	69.7	68.6	70.1	75.2	79.6	83.7

ORIGINAL PAGE IS
OF POOR QUALITY

TABLE C-11. % AURALLY COMMUNICATE SOME DURING HOUR (WEEKENDS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
SATURDAY	8.1	5.7	2.4	1.2	.8	2.6	7.2	16.2	20.8	21.3	20.4	21.3	26.4	23.3	22.9	27.2	31.9	36.6	43.9	46.5	48.5	48.5	37.3	21.4
SUNDAY	8.5	5.1	2.4	1.2	.8	1.7	4.6	12.5	22.7	27.5	24.8	24.3	31.0	31.6	30.0	39.9	34.5	40.9	46.7	53.2	55.6	51.9	37.5	17.9
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	8.5	5.3	1.1	.6	.6	2.2	6.8	11.3	23.0	26.9	25.6	24.5	30.8	31.9	30.8	34.3	36.2	44.9	54.0	57.7	54.2	50.2	44.9	21.8
MARCH	7.6	5.2	3.1	1.4	.9	1.7	6.3	17.5	22.0	21.0	22.1	22.5	33.3	28.0	26.9	28.2	34.8	40.9	46.2	50.6	52.5	50.2	34.9	19.1
MAY	8.0	5.1	2.5	1.3	.7	2.5	5.4	12.4	21.2	24.2	21.6	22.8	25.9	24.5	24.2	28.6	31.2	35.8	42.2	47.0	50.7	50.2	38.7	19.4
SEPTEMBER	11.4	7.3	1.5	1.0	1.1	2.5	5.3	14.2	21.5	23.5	24.1	21.9	30.0	30.2	27.6	27.1	31.1	34.6	42.2	47.5	52.9	50.2	32.2	19.7
EXTENT OF URBANIZATION																								
100,000+	10.4	6.1	3.2	2.5	1.9	3.2	6.6	11.6	18.5	25.1	23.2	24.4	28.8	30.2	28.5	31.5	35.3	39.1	43.8	48.0	51.3	50.4	38.3	22.2
OTH. SMSA	10.8	7.5	3.0	1.2	.4	2.2	4.4	12.5	21.8	24.6	23.3	20.9	29.3	28.8	25.9	27.4	29.9	36.4	45.1	50.5	50.8	54.2	43.2	24.0
NON-SMSA	6.6	4.3	1.9	.7	.5	1.8	6.2	16.2	23.1	24.1	22.2	22.9	28.5	25.9	25.9	28.7	33.6	39.5	45.9	50.0	52.9	48.6	34.8	17.0
SECTION OF COUNTRY																								
WEST	5.8	3.8	2.3	1.0	.7	2.1	6.3	16.0	21.1	27.0	25.4	24.2	29.4	25.3	24.5	25.3	30.3	40.9	47.5	52.9	55.7	52.6	34.0	15.1
N CENTRAL	11.4	6.9	3.2	1.7	.7	2.3	4.4	13.7	20.5	22.3	21.6	20.8	28.4	26.4	26.6	28.7	31.5	37.0	45.9	51.1	53.4	52.1	41.5	23.8
N EAST	8.0	6.1	2.2	.7	.9	1.6	5.7	12.2	21.6	25.6	23.5	24.2	28.1	28.6	27.5	31.9	40.0	41.8	43.5	45.8	45.7	47.4	40.2	23.1
SOUTH	6.8	4.3	1.7	1.1	1.1	2.4	7.5	15.4	23.9	24.2	21.2	23.4	29.0	28.0	27.1	30.0	32.7	37.5	44.2	49.0	52.2	48.2	33.2	15.8
SEX OF RESPONDENT																								
MALE	7.9	4.8	1.9	1.1	.5	1.6	5.7	14.3	19.6	21.8	20.8	22.0	30.3	27.9	26.8	29.0	33.9	40.3	44.8	48.5	52.2	49.5	36.7	19.0
FEMALE	8.6	5.9	2.8	1.3	1.1	2.7	6.1	14.4	23.6	26.6	24.2	23.5	27.4	27.2	26.1	28.0	32.7	37.5	45.7	50.2	52.0	50.8	37.9	20.2
AGE OF RESPONDENT																								
18-24 YR	10.7	6.4	3.6	2.3	.4	1.6	3.4	6.7	14.5	22.0	28.4	25.5	23.7	25.4	23.4	24.4	27.4	34.3	38.1	44.9	41.0	43.1	35.7	22.5
25-44 YR	9.8	6.4	3.2	1.5	1.5	2.4	5.3	14.3	21.6	26.0	23.2	23.2	28.3	27.1	26.5	29.0	31.9	38.5	42.6	46.4	50.8	50.3	33.7	21.9
45-64 YR	8.2	5.6	2.1	.9	.5	2.8	7.3	17.7	25.5	25.1	20.1	21.2	31.1	30.2	27.7	29.3	36.1	39.7	48.3	53.2	54.7	53.6	38.9	18.6
65-97 YR	2.1	1.2	0	0	.4	1.8	9.9	21.3	29.4	27.6	23.7	25.2	38.5	30.8	29.9	35.5	40.7	48.8	59.2	59.6	60.5	51.0	30.9	13.4
TOTAL SAMPLE																								
	8.3	5.4	2.4	1.2	.8	2.2	5.9	14.4	21.8	24.4	22.6	22.8	28.7	27.5	26.5	29.0	33.2	38.8	45.3	48.9	52.1	50.2	37.4	19.6

TABLE C-12. PERCENT SLEEPING SOME DURING HOUR (WEEKENDS)

SUBGROUP	HOUR OF THE DAY																							
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
DAY OF WEEK																								
SATURDAY	78.5	83.8	88.9	90.6	91.1	88.5	79.0	58.7	32.7	17.4	8.3	5.5	5.3	7.7	8.5	9.2	8.0	6.9	4.8	4.7	6.3	15.2	36.3	58.4
SUNDAY	75.1	82.8	87.8	89.5	90.1	88.6	81.5	63.6	37.6	18.8	9.2	5.8	6.0	8.9	11.3	9.8	8.7	6.5	4.7	5.3	9.1	22.1	51.3	75.3
INTERVIEW WAVE (PRIMARY MONTH)																								
NOVEMBER	75.4	85.7	91.1	92.0	92.6	90.6	82.4	66.1	38.2	18.3	9.5	6.1	3.9	7.2	8.5	9.5	9.9	7.4	5.3	5.9	11.5	26.0	49.1	73.8
MARCH	77.3	82.5	88.2	90.9	91.4	89.4	81.6	60.9	36.3	20.3	10.8	6.8	6.0	8.3	10.0	8.8	7.9	6.1	4.5	5.3	8.2	18.4	43.9	66.1
MAY	77.0	83.2	87.2	88.5	89.1	87.1	77.7	58.9	32.7	15.4	6.3	3.7	5.4	7.9	9.1	8.8	8.5	7.1	4.4	3.8	5.7	16.2	41.4	64.7
SEPTEMBER	75.7	83.5	89.0	90.2	90.4	88.1	81.6	63.3	35.6	19.7	9.3	8.0	7.3	11.1	13.8	14.2	7.6	6.6	6.1	7.1	8.6	19.5	45.6	68.6
EXTENT OF URBANIZATION																								
100,000+	72.6	81.0	86.5	89.1	89.6	88.1	79.2	63.0	41.2	21.7	12.2	9.9	6.7	8.6	10.7	9.1	8.9	8.1	6.1	6.0	8.9	17.3	41.2	63.7
OTH. SMSA	72.1	81.1	86.0	88.5	90.1	88.8	82.0	67.7	38.3	19.4	8.2	4.8	4.3	6.4	8.1	8.0	6.4	4.6	3.2	3.0	4.3	13.2	35.9	62.2
NON-SMSA	80.1	85.1	89.9	91.0	91.1	88.6	80.0	58.0	31.6	16.2	7.6	4.3	5.7	8.9	10.3	10.2	8.9	7.0	4.8	5.4	8.6	21.4	47.9	69.9
SECTION OF COUNTRY																								
WEST	77.4	83.6	88.6	89.5	91.0	87.9	80.1	61.0	32.7	13.8	6.6	4.7	5.2	8.6	10.1	10.0	9.9	5.7	3.7	2.3	7.1	21.0	50.9	70.7
N CENTRAL	72.7	81.7	86.4	88.0	89.1	87.4	80.6	62.0	36.5	21.0	8.6	6.1	5.0	6.9	9.5	9.8	7.9	6.6	4.2	4.1	6.2	16.1	39.2	63.1
N EAST	77.5	84.0	91.0	93.7	93.9	92.9	84.0	67.3	42.3	20.8	9.1	4.8	5.1	6.0	6.7	6.8	5.4	5.6	4.7	6.7	9.0	15.4	35.0	63.8
SOUTH	80.4	84.6	88.5	90.4	89.9	87.5	77.5	56.3	30.6	16.1	10.3	6.5	7.0	11.3	12.3	10.5	9.7	8.3	6.1	6.8	9.1	22.2	50.0	70.6
SEX OF RESPONDENT																								
MALE	75.8	82.8	87.1	88.7	89.5	87.1	77.8	58.5	34.5	19.0	10.8	6.7	6.4	9.8	9.5	9.1	8.2	7.3	5.2	6.0	8.9	20.1	44.4	66.3
FEMALE	77.5	83.8	89.3	91.5	91.5	89.8	82.3	63.4	35.7	17.4	7.1	4.8	5.0	7.1	10.2	9.8	8.5	6.3	4.4	4.2	6.8	17.6	43.4	67.4
AGE OF RESPONDENT																								
18-24 YR	62.8	70.6	80.5	84.1	86.0	85.3	80.6	70.1	55.8	36.9	17.7	8.2	5.0	5.4	6.3	8.5	6.3	7.6	5.9	3.8	3.9	10.6	28.5	51.2
25-44 YR	70.7	79.6	85.4	87.4	88.5	86.8	79.5	62.8	37.2	17.2	7.2	4.3	3.5	5.4	7.1	8.0	7.5	5.9	4.0	3.9	6.5	14.7	38.6	63.2
45-64 YR	83.9	88.5	91.6	92.8	92.5	90.2	79.9	57.0	30.2	13.5	5.8	4.6	5.5	8.3	11.0	9.6	9.1	6.3	5.3	6.8	9.0	21.2	48.8	72.2
65-97 YR	93.1	94.9	96.5	95.8	96.3	93.6	83.3	57.8	22.1	12.8	10.5	8.9	13.2	20.0	18.6	15.2	11.5	8.5	5.6	6.0	12.9	32.5	63.5	83.7
TOTAL SAMPLE																								
	76.8	83.3	88.3	90.1	90.6	88.6	80.3	61.2	35.1	18.1	8.8	5.7	5.6	8.3	9.9	9.5	8.4	6.7	4.8	5.0	7.7	18.7	43.9	66.9

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Table I. Distribution of Interviews by Day of Week and Study Wave

Study Wave	Diary Day				
	Monday - Thursday	Friday	Saturday	Sunday	TOTAL
Wave 1 (October-November)	61% 44% (594)	14 28% (134)	5 5% (54)	20 20% (193)	100% (975)
Wave 2 (February-March)	16% 11 (154)	9 18 (89)	38 38 (367)	37 36 (354)	100% (964)
Wave 3 (May-June)	18% 12 (170)	3 6 (27)	43 42 (409)	36 35 (337)	100% (943)
Wave 4 (September)	49% 33 (449)	25 48 (231)	16 15 (145)	10 9 (91)	100% (916)
TOTAL	100% (1367)	100% (481)	100% (975)	100% (975)	(3798)

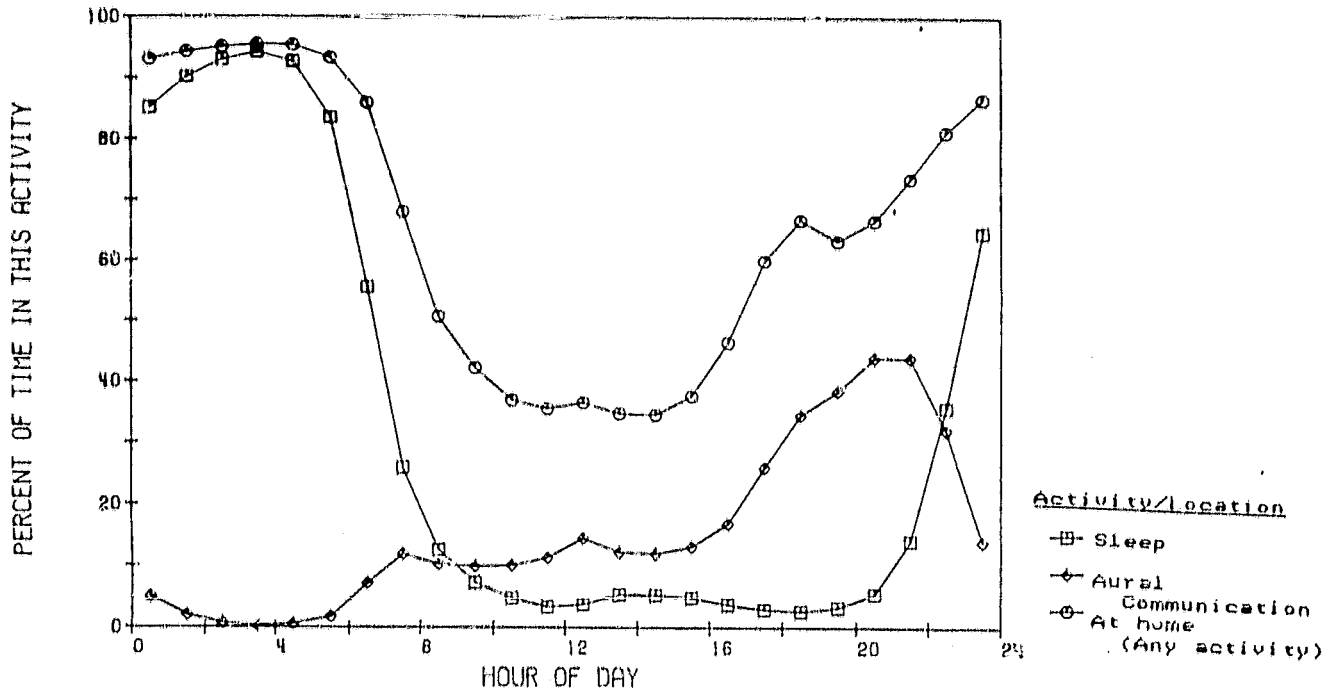

Figure 1: Average time (percentage) at home and in two activities(at home) on weekdays (Monday - Friday)

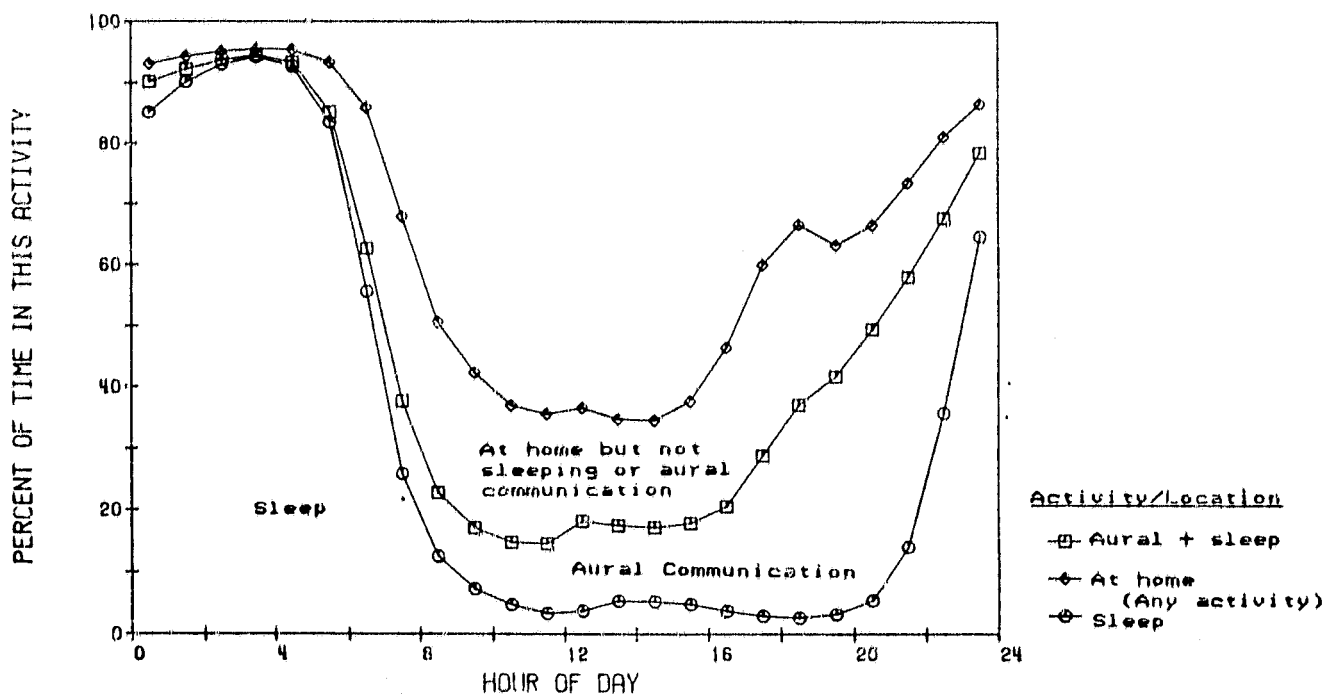

Figure 2: Average time (percentage) at home and cumulated for two activities (at home) on weekdays (Monday - Friday)

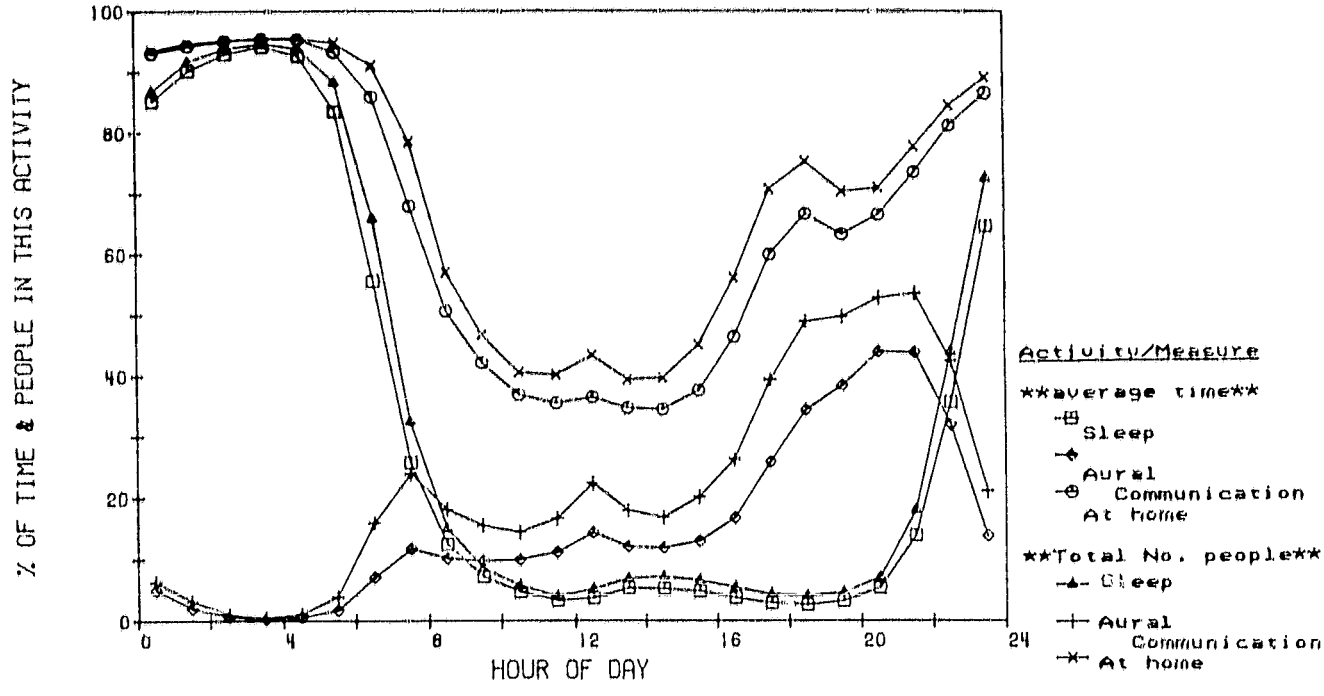

Figure 3: Average time (percentage) and total numbers of people (percentage of respondents) at home and in two activities (at home) (on weekdays)

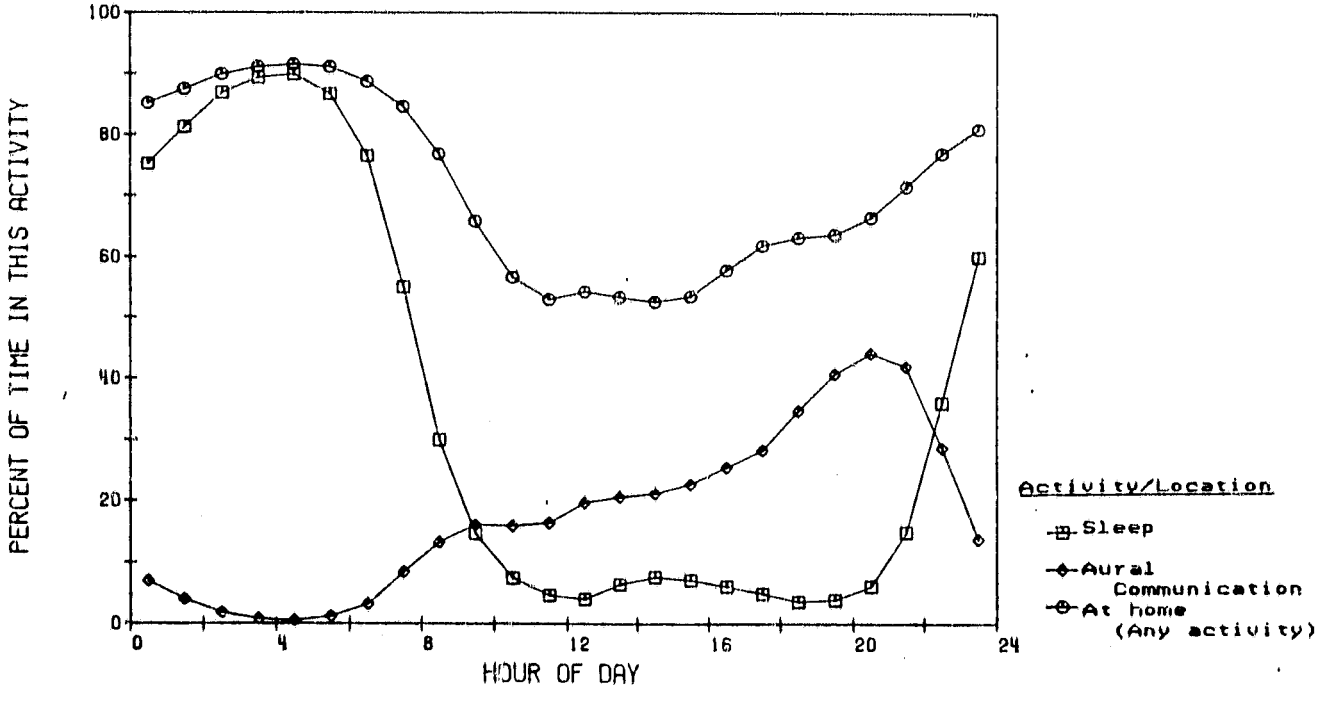

Figure 4: Average time (percentage) at home and in two activities (at home) on weekends (Saturday-Sunday)

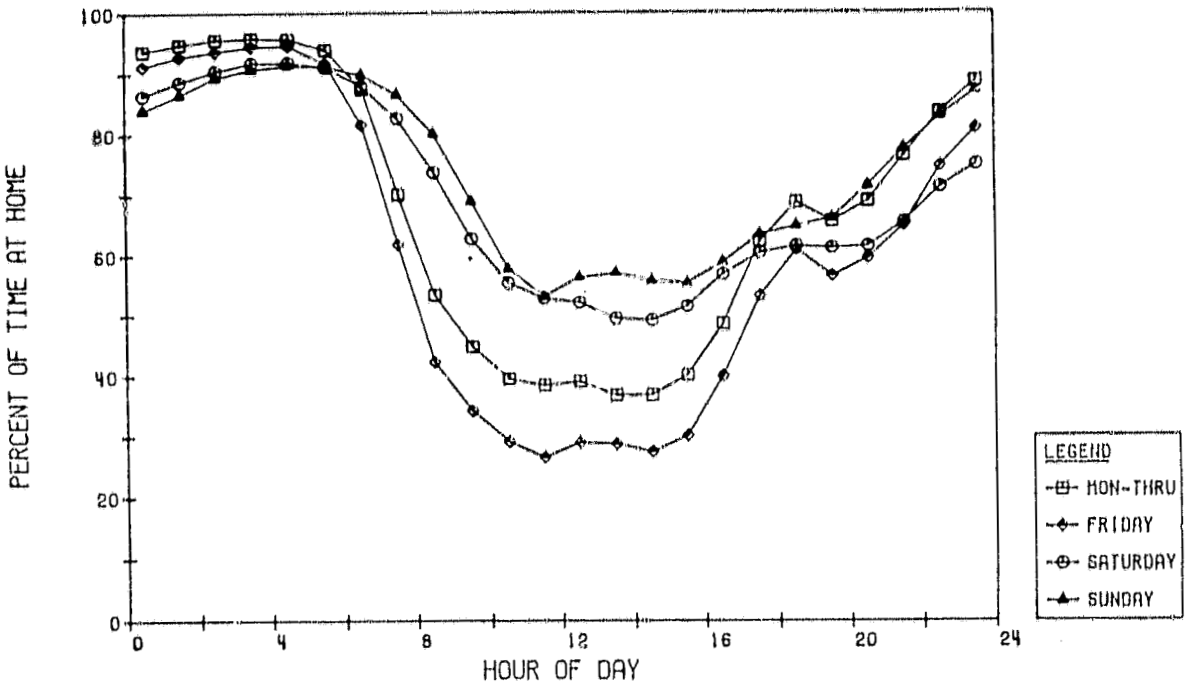

Figure 5: Average time (percentage) at home on four types of days

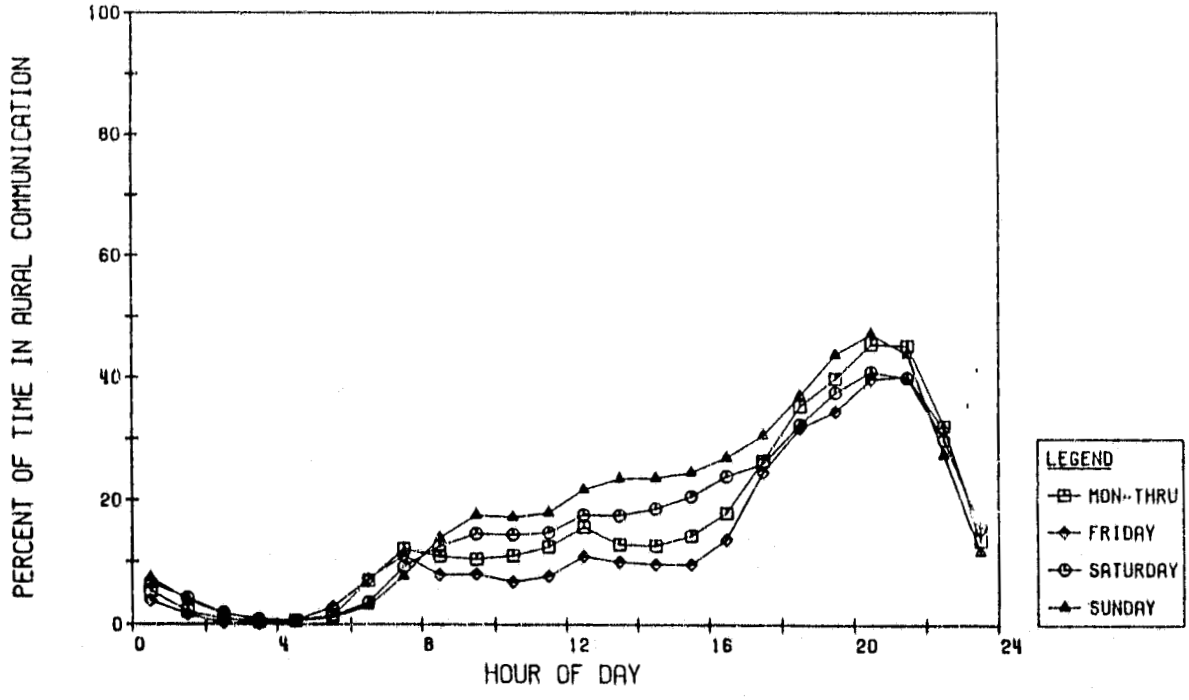

Figure 6: Average time (percentage) engaged in aural communication on four types of days

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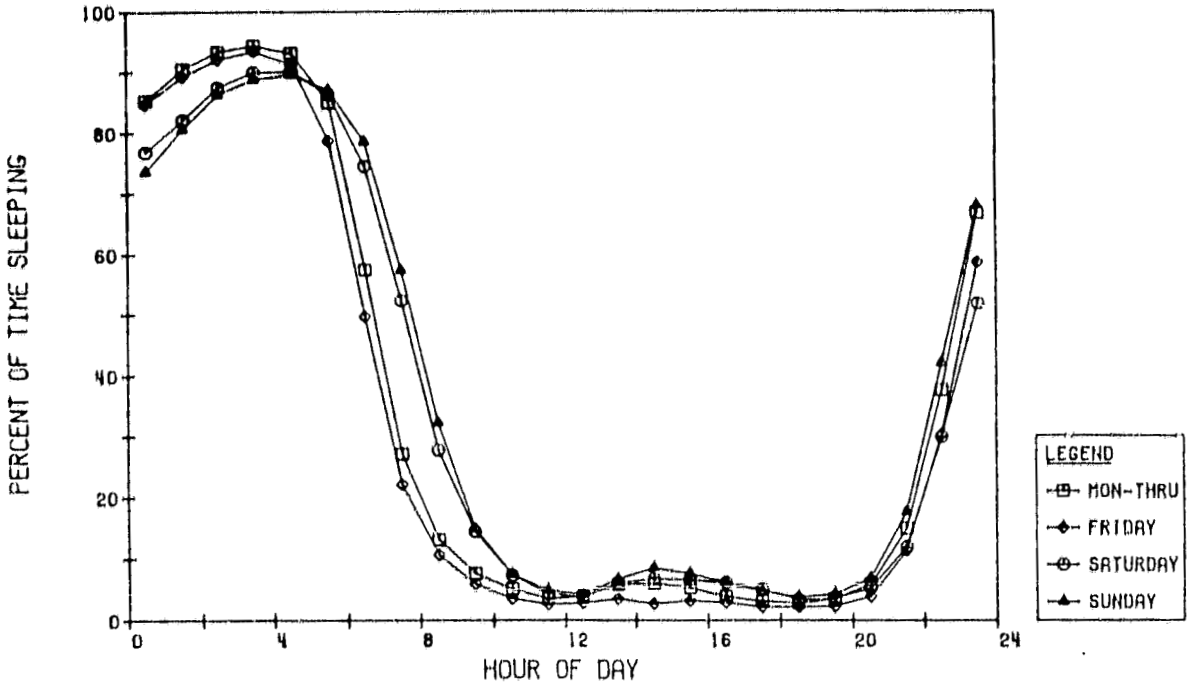

Figure 7: Average time (percentage) sleeping on four types of days

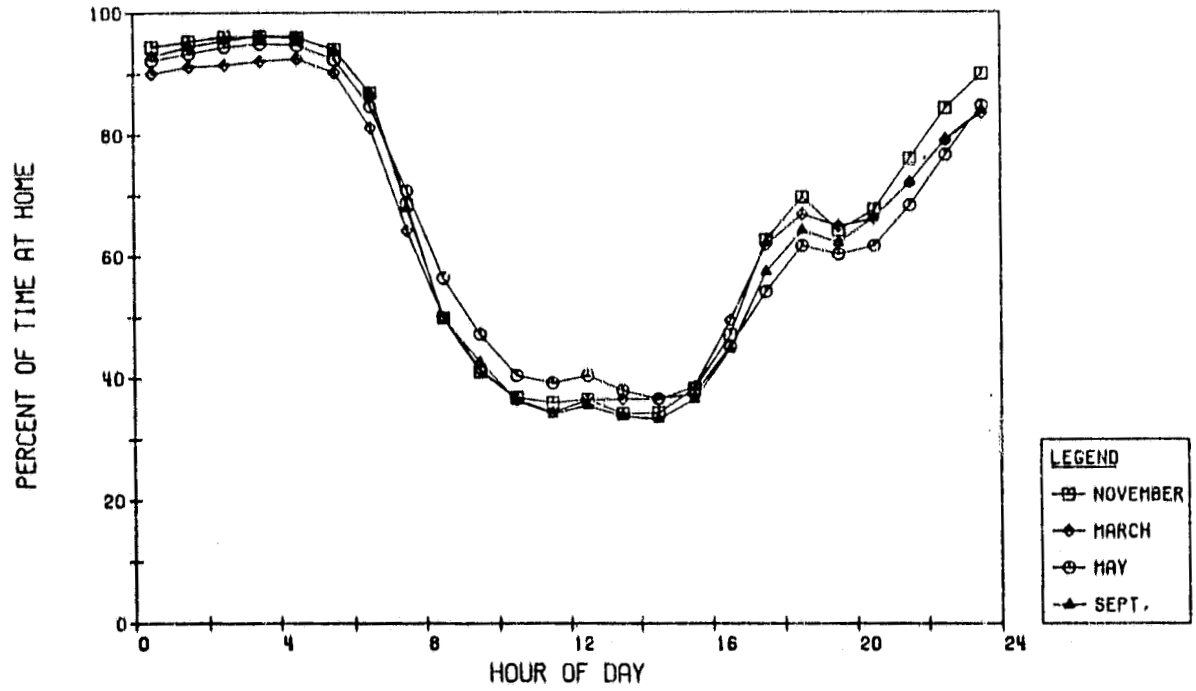

Figure 8: Average time (percentage) at home for each survey wave

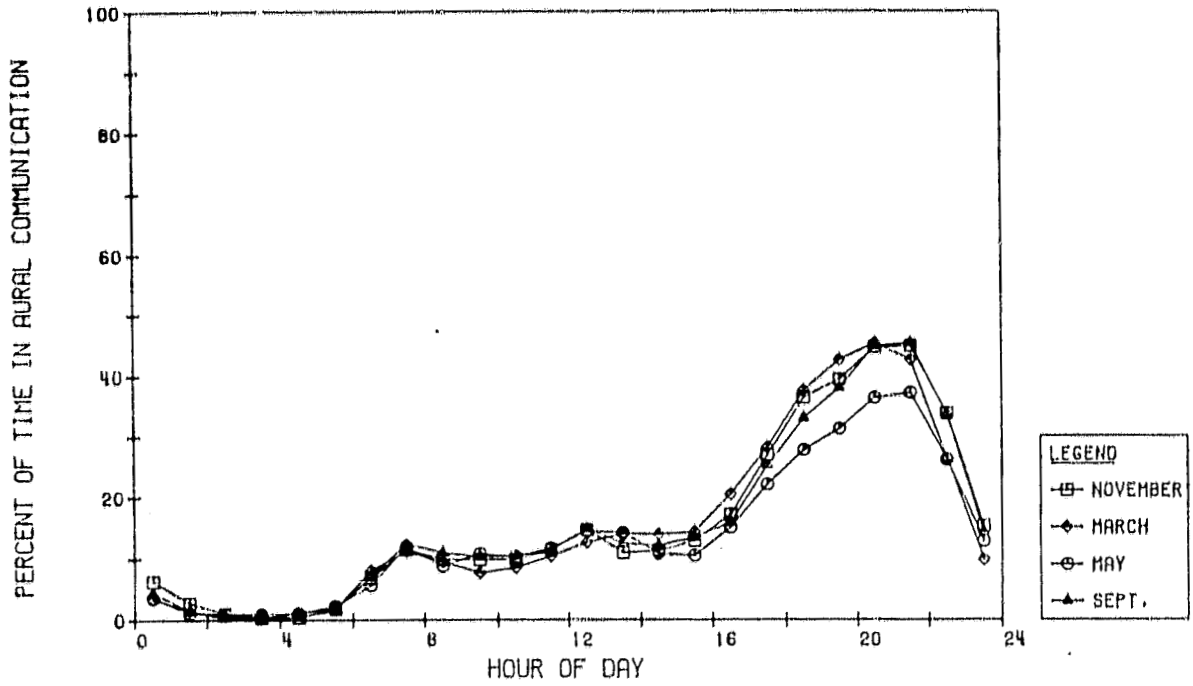

Figure 9: Average time (percentage) engaged in aural communication for each survey wave

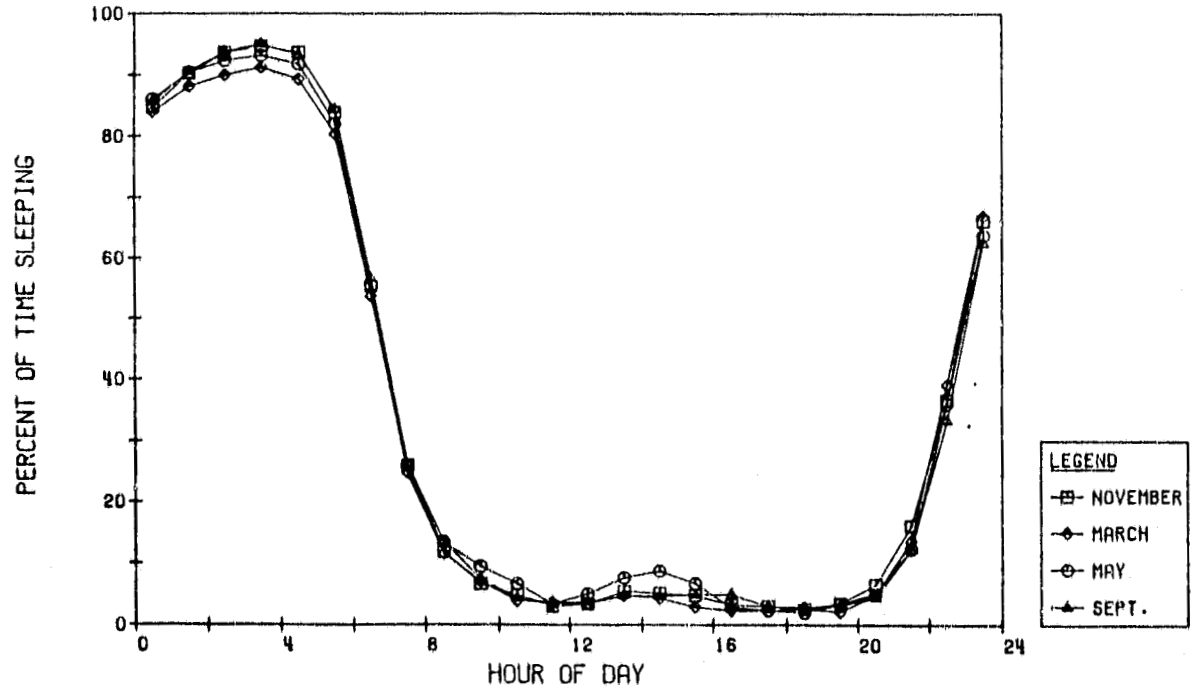

Figure 10: Average time (percentage) sleeping for each survey wave

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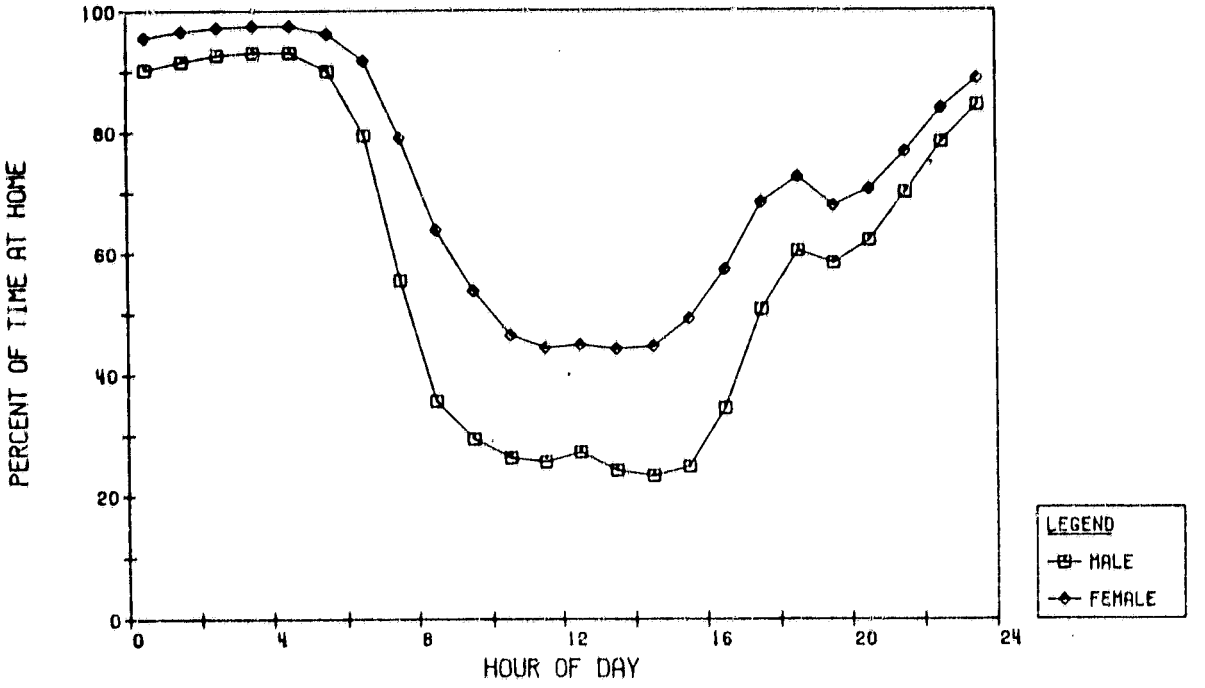

Figure 11: Average time (percentage) at home for males and females

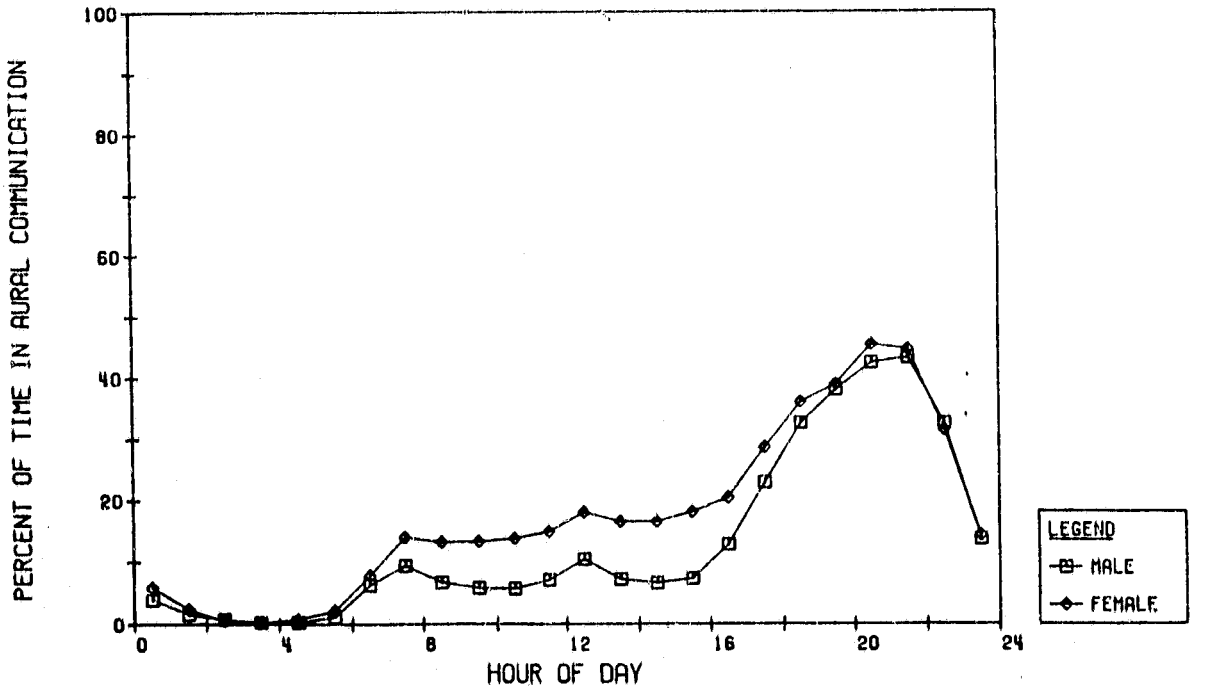

Figure 12: Average time (percentage) engaged in aural communication for males and females

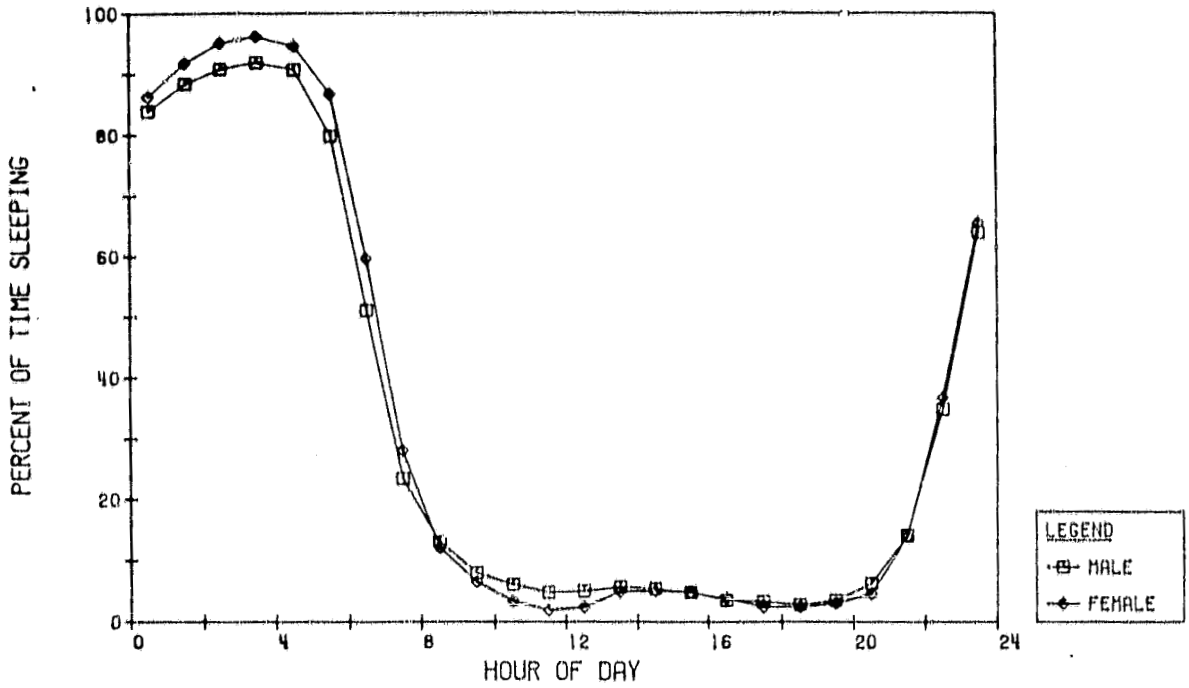

Figure 13: Average time (percentage) sleeping for males and females

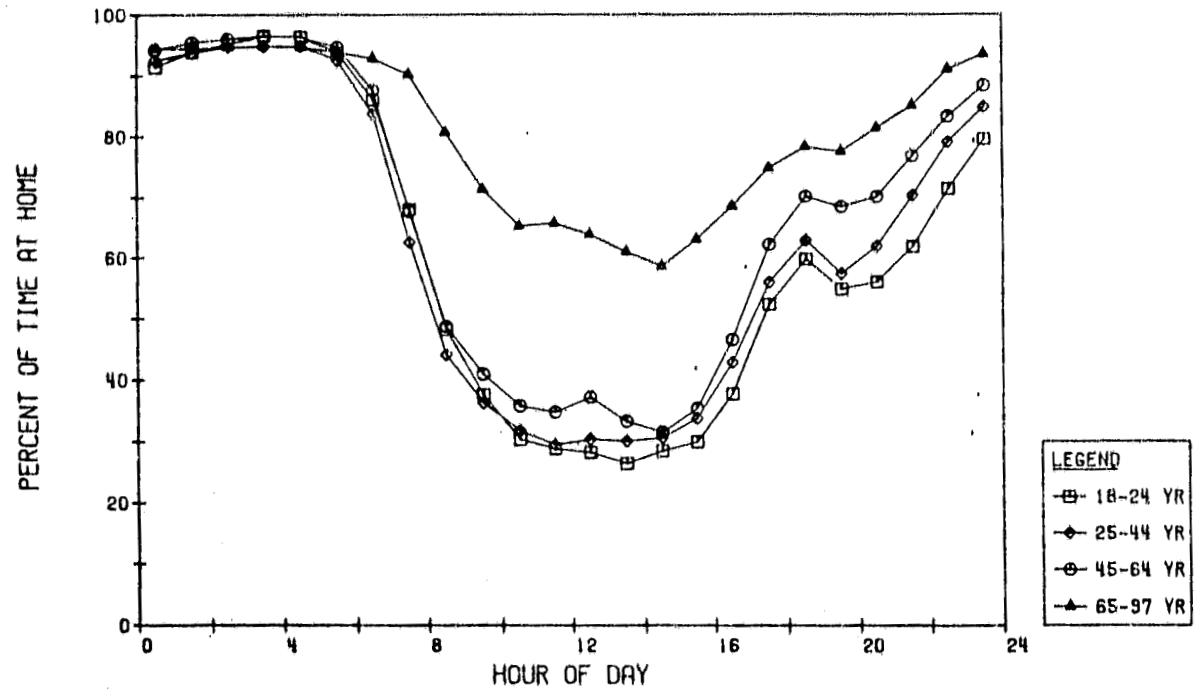

Figure 14. Average time (percentage) at home for four age groups

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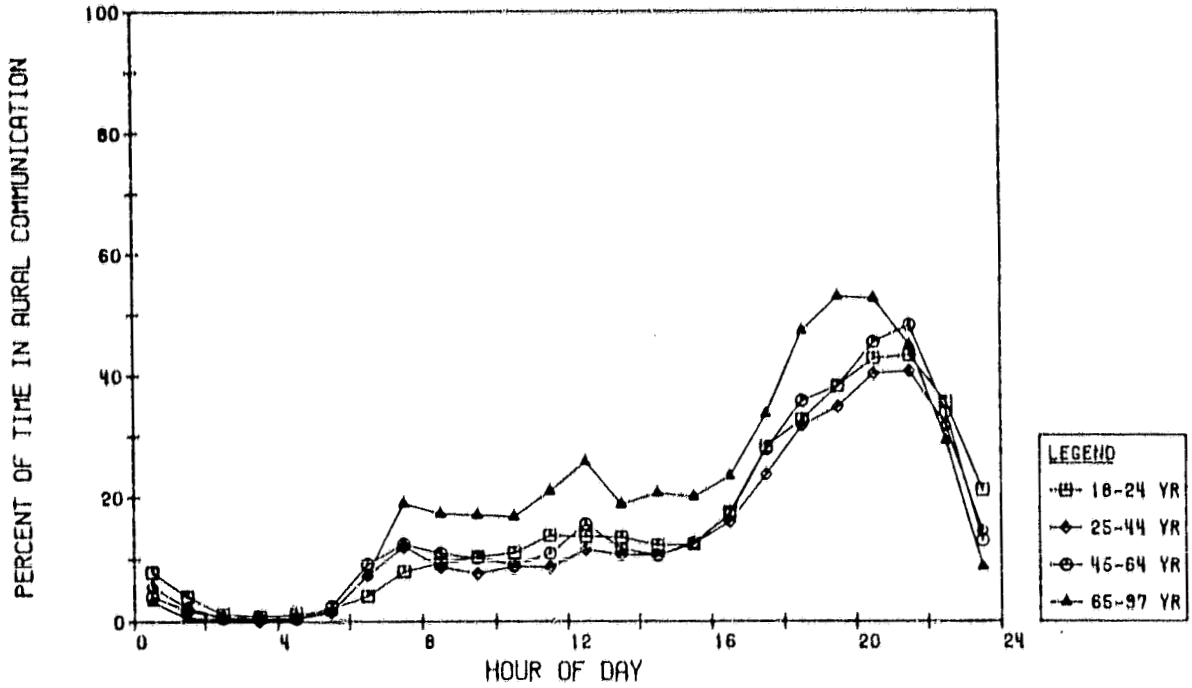

Figure 15. Average time (percentage) engaged in aural communication for four age groups

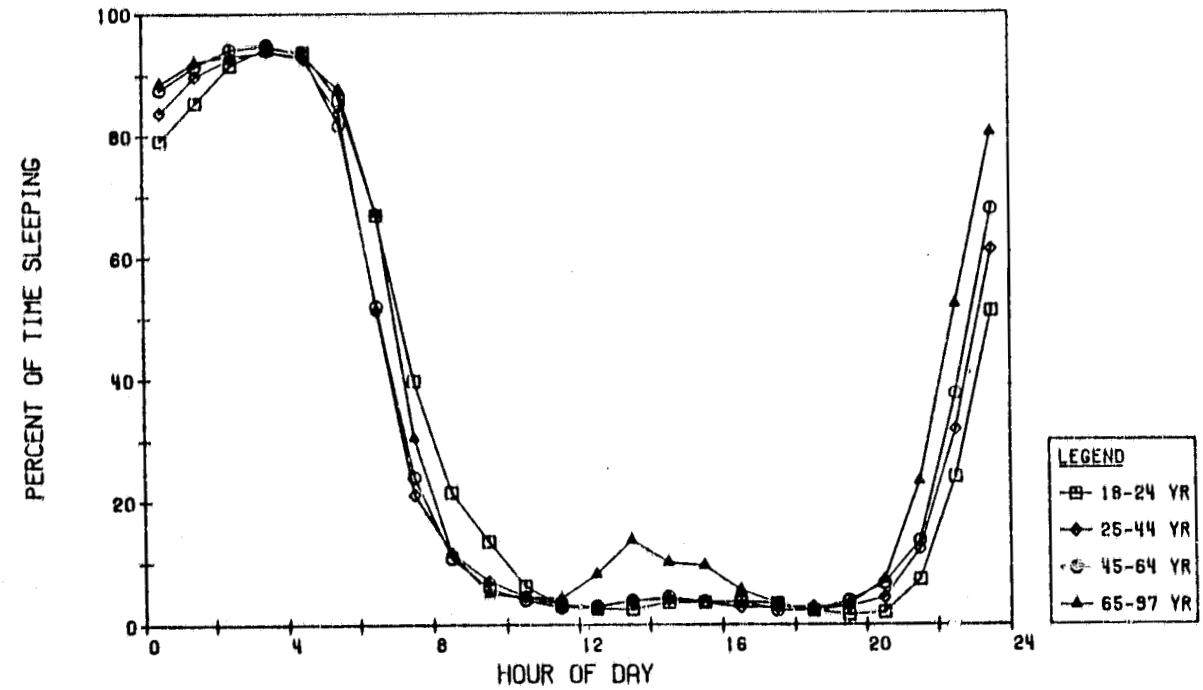

Figure 16. Average time (percentage) sleeping for four age groups

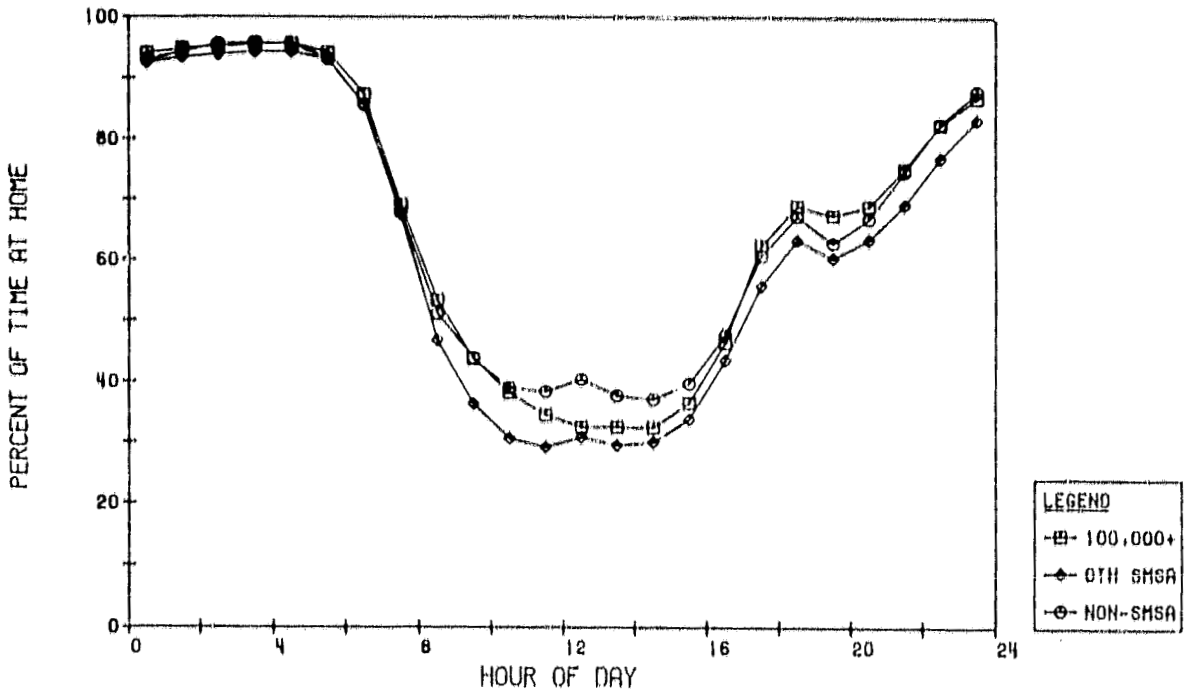

Figure 17. Average time (percentage) at home for areas which differ in urbanization

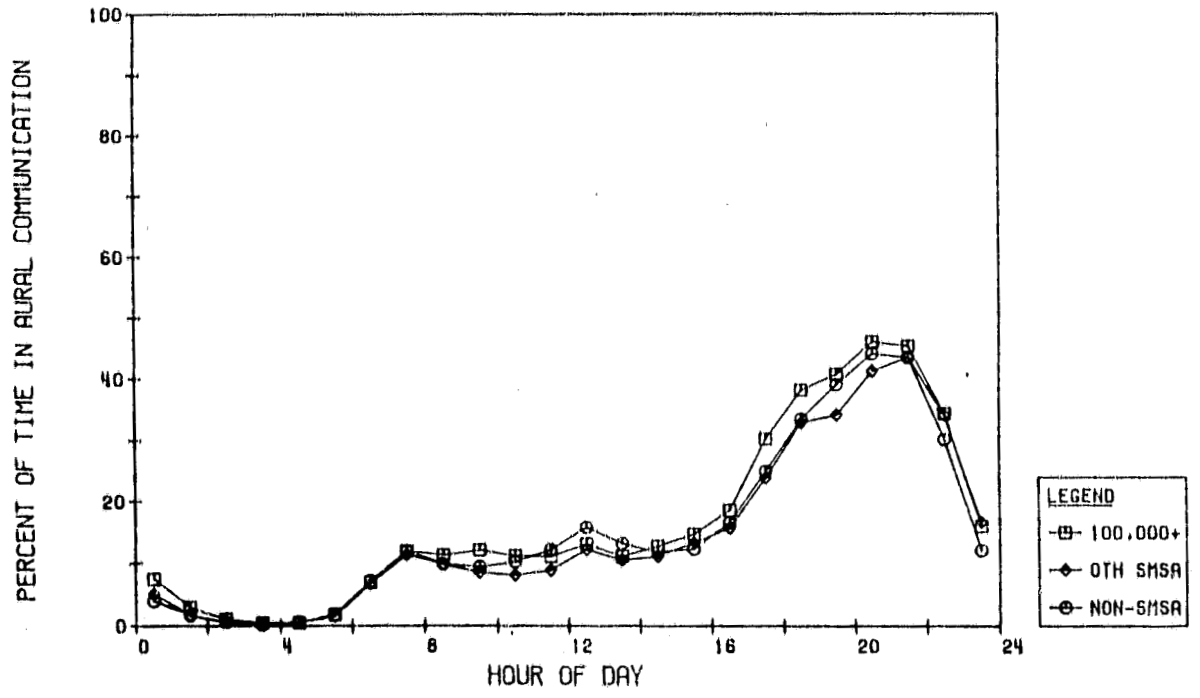

Figure 18. Average time (percentage) engaged in aural communication for areas which differ in urbanization

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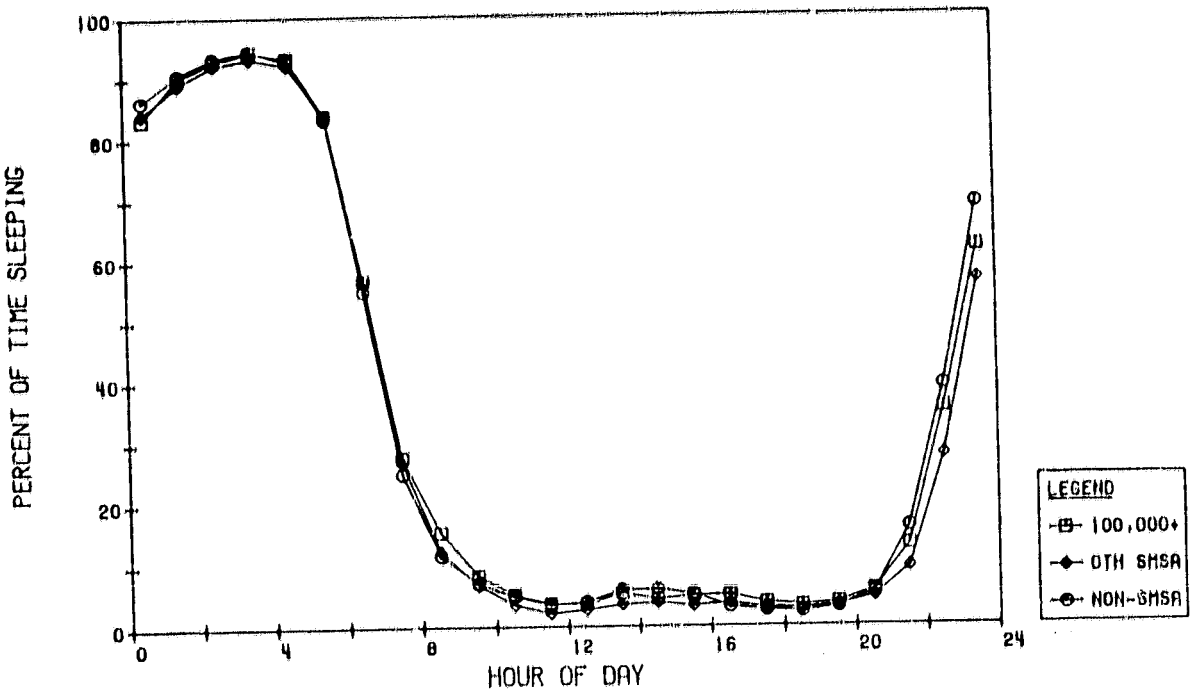

Figure 19. Average time (percentage) sleeping for areas which differ in urbanization

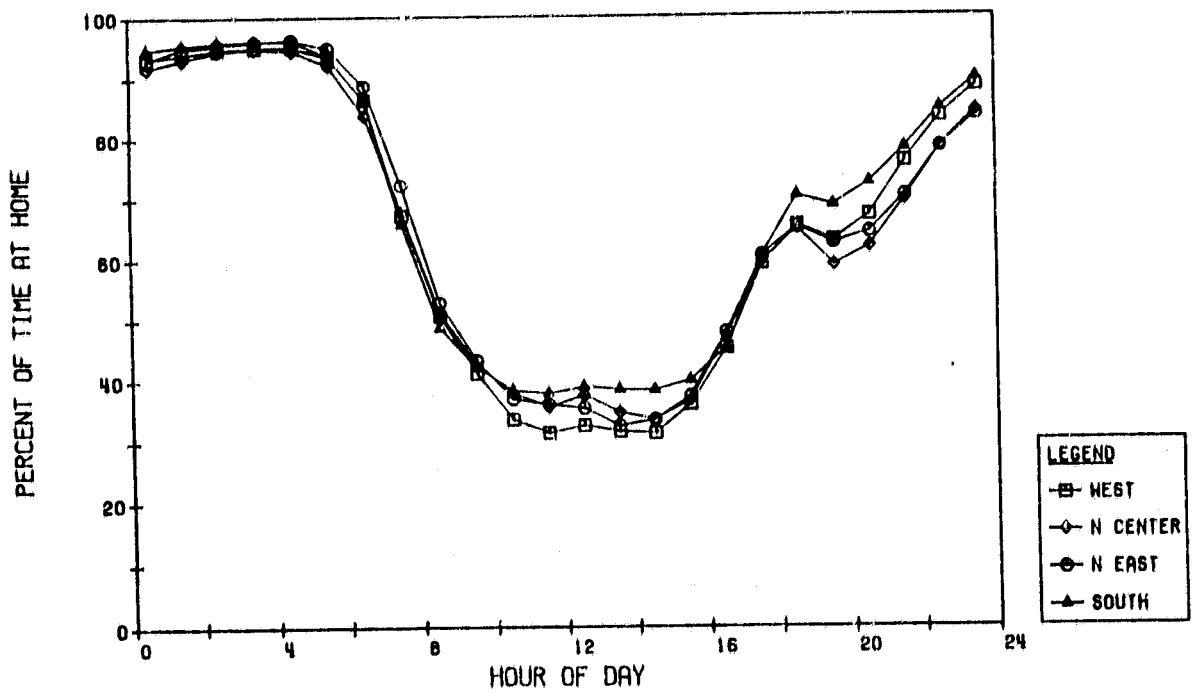

Figure 20. Average time (percentage) at home for four sections of the country

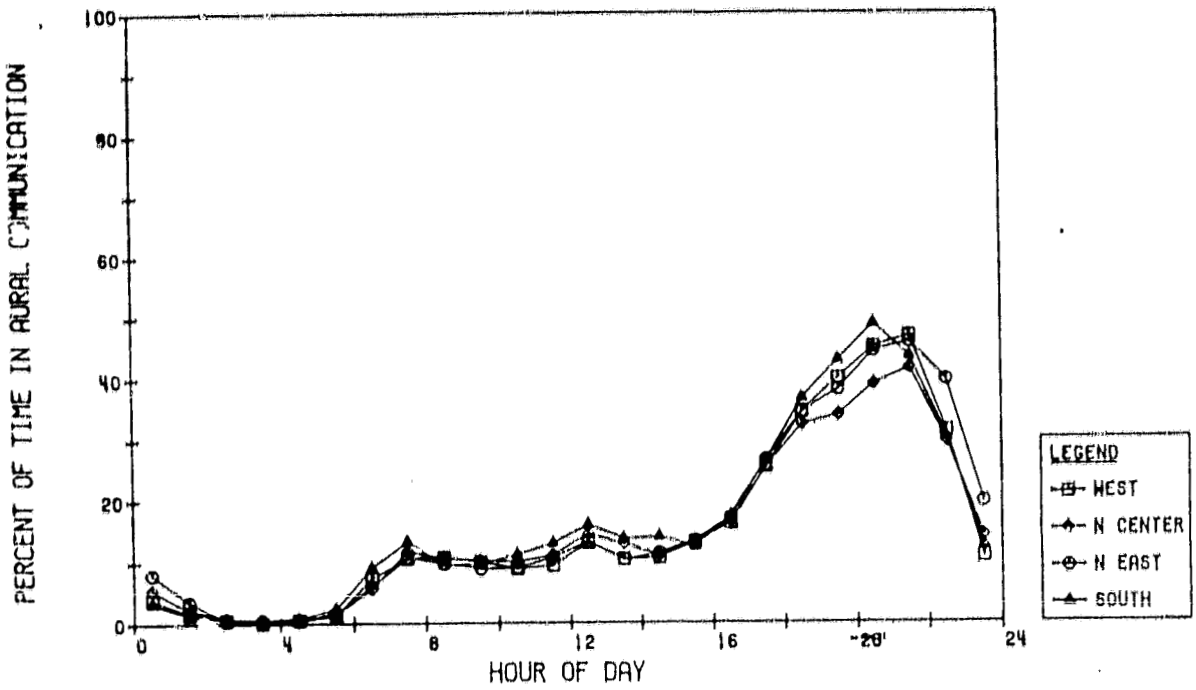

Figure 21. Average time (percentage) engaged in aural communication for four sections of the country

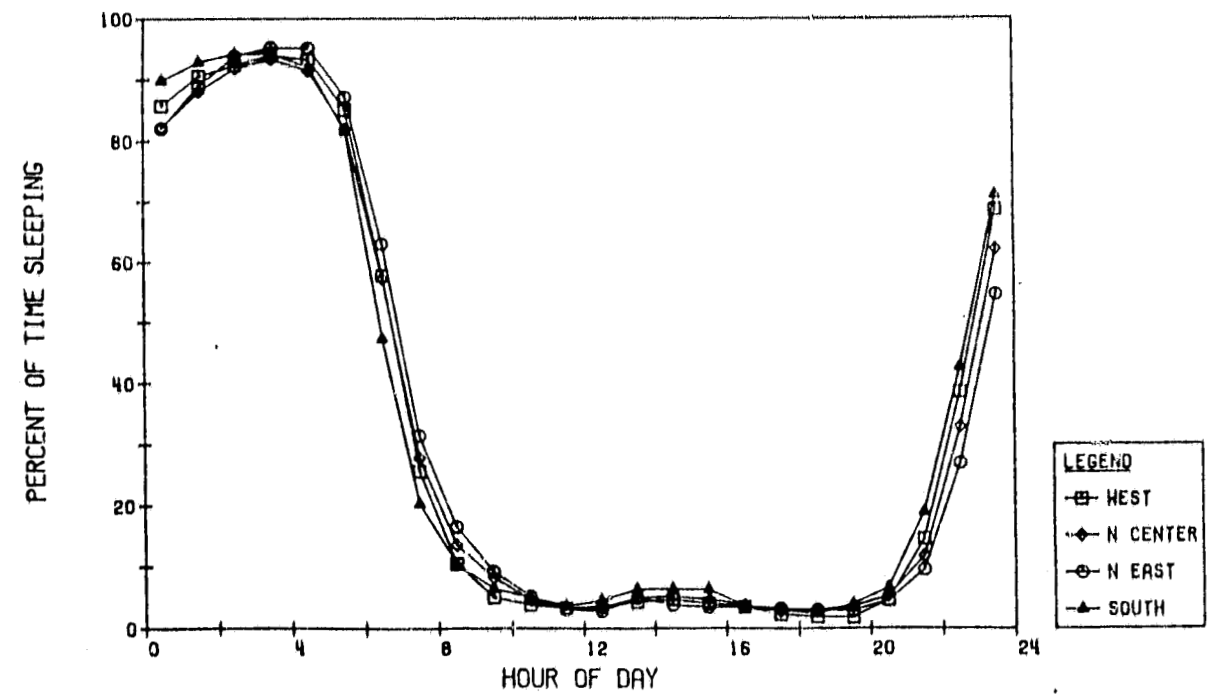

Figure 22. Average time (percentage) sleeping for four sections of the country

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
NASA CR-177937		

4. Title and Subtitle	5. Report Date
The Timing of Noise-Sensitive Activities in Residential Areas	July 1985
	6. Performing Organization Code

7. Author(s)	8. Performing Organization Report No.
James M. Fields	
	10. Work Unit No.

9. Performing Organization Name and Address	11. Contract or Grant No.
The Bionetics Corporation 20 Research Drive Hampton, VA 23666	NAS1-16978
	13. Type of Report and Period Covered
	Contractor Report

12. Sponsoring Agency Name and Address		14. Sponsoring Agency Code
National Aeronautics and Space Administration Washington, DC 20546	FAA Office of Envir. and Energy, Wash., DC 20591	505-35-13-53

15. Supplementary Notes

Langley Technical Monitor: Clemans A. Powell

16. Abstract

Data from a 1975-76 nationally representative survey of time-use have been analyzed to provide estimates of the percentage of the population which is engaged in noise-sensitive activities during each hour of the day on weekdays, Fridays, Saturdays and Sundays. Estimates are provided of the percentage engaged in aural communication activities at home, sleeping at home, or simply at home. The day can be roughly divided into four noise sensitivity periods consisting of two relatively steady state periods, night (2400 to 0300) and day (0900 to 1600), and the early morning and evening transition periods. Weekends differ from weekdays in that the morning transition period is one hour later and the numbers of people engaged in aural communication during the day at home are approximately one-half to three-quarters greater.

The extent and timing of noise-sensitive activites was found to be similiar for all parts of the United States, for different sizes of urban areas, and for the three seasons surveyed (September through May). The timing of activity periods does not differ greatly by sex or age even though women and people over 65 are much more likely to be at home during the daytime.

17. Key Words (Suggested by Author(s))	18. Distribution Statement
Noise Annoyance	Unclassified - Unlimited Subject Category - 71

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	52	A04

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